

September 26, 2006

Mr. Roy Crossland START Project Officer U.S. Environmental Protection Agency, Region 7 901 North 5th Street Kansas City, Kansas 66101

Subject:

Removal Site Evaluation Report United Zinc #1 Site, Iola, Kansas

U.S. EPA Region 7 START 3, Contract No. EP-S7-06-01, Task Order No. 0011.000

Task Monitor: Eddie McGlasson, EPA On-Scene Coordinator

Dear Mr. Crossland:

Tetra Tech EM Inc., is submitting the attached Removal Site Evaluation Report for the above-referenced site. If you have any questions or comments regarding this submittal, please contact the project manager at 913-908-4649.

Sincerely,

Rick Claytor, CHMM START Project Manager

Ted Faile, PG, CHMM START Program Manager

**Enclosures** 

30290954

## REMOVAL SITE EVALUATION REPORT UNITED ZINC #1 SITE – IOLA, KANSAS

#### Superfund Technical Assessment and Response Team (START) 3 Contract No. EP-S7-06-01, Task Order No. 0011.000

Prepared For:

U.S. Environmental Protection Agency Region 7 901 North 5<sup>th</sup> Street Kansas City, Kansas 66101

September 26, 2006

Prepared By:

Tetra Tech EM, Inc. 8030 Flint Street Lenexa, Kansas 66214 (913) 894-2600

## **CONTENTS**

Section	<u>n</u>		<u>Page</u>
1.0	INTRO	DDUCTION	1
2.0	SITE I	DESCRIPTION AND PREVIOUS INVESTIGATIONS	1
3.0	REMO	OVAL SITE EVALUATION ACTIVITIES	2
	3.1 3.2 3.3	XRF SCREENINGSOIL SAMPLING FOR XRF CONFIRMATIONSOIL SAMPLING FOR BIOAVAILABILITY STUDY	3
4.0	DATA	SUMMARY	3
	4.1 4.2	SOIL SAMPLES FOR XRF CONFIRMATION SOIL SAMPLES FOR BIOAVAILABILITY STUDY	
5.0	CONC	LUSIONS	8
	5.1 5.2	REMOVAL CONSIDERATIONSPRE-REMEDIAL CONSIDERATIONS	
<u>Appen</u>	<u>dices</u>		
Α	FIGUR	RES	
В	PROPI	ERTY SCREENING FORMS	
С	SAMP	LE COLLECTION FIELD SHEETS AND CHAIN-OF-CUSTODY RECORDS	
D	REMO	VAL SITE EVALUATION FORM	
<u>Attach</u>	<u>ments</u>		
1	DATA SAMP	FROM EPA REGION 7 LABORATORY FOR XRF CONFORMATION LES	
2	DATA	FROM EPA REGION 7 LABORATORY FOR BIOAVAILABILITY SAMPLES	
3		FROM UNIVERSITY OF COLORADO LABORATORY FOR AILABILITY SAMPLES AND DATA VALIDATION REPORT	

### **TABLES**

<u>Table</u>	<u>Page</u>
1	SUMMARY OF XRF AND LABORATORY LEAD CONCENTRATIONS4
2	SUMMARY OF PROPERTIES MEETING TIME-CRITICAL REMOVAL CRITERIA7
3	SUMMARY OF BIOAVAILABILITY SAMPLING RESULTS8

#### 1.0 INTRODUCTION

Tetra Tech EM Inc., (Tetra Tech) was tasked by the U.S. Environmental Protection Agency (EPA) Region 7 Superfund Division, under Superfund Technical Assessment and Response Team (START) 3 Contract Number EP-S7-06-01, Task Order Number 0011, to conduct a removal site evaluation (RSE) at the United Zinc (UZ) #1 site in Iola, Kansas. The primary objective of the RSE was to assess the extent of lead, zinc, arsenic, and cadmium contamination in surface soils as a result of historic zinc and lead smelting activities in the area. To accomplish the objective, Tetra Tech START conducted field screening of surface soils with a portable x-ray fluorescence (XRF) spectrometer at daycare facilities, schools, parks, and residential properties. Soil samples from approximately 10 percent of the screened locations were collected and submitted to the Region 7 EPA laboratory in Kansas City, Kansas, for laboratory confirmation analyses of lead, zinc, arsenic, and cadmium. The following sections discuss previous investigations at the site, procedures used during this investigation, and analytical data obtained during this RSE.

#### 2.0 SITE DESCRIPTION AND PREVIOUS INVESTIGATIONS

The UZ #1 site is located in and around the city limits of Iola, Kansas. The site location is illustrated on Figure 1 in Appendix A. The area of concern is a mix of residential and commercial properties, along with schools, daycares, and historical smelting areas.

With the discovery of natural gas in the area, ample fuel became available to support numerous zinc and lead smelting operations in the region. From 1902 until 1912, the United Zinc and Chemical Company utilized the site for lead and zinc smelting and processing operations.

Under the Kansas Department of Health and Environment's (KDHE) State Water Plan (SWP) program, a Phase I Focused Former Smelter Assessment was completed at the UZ #1 site in December 2003. The assessment identified the site as a potential source of heavy metals contamination due to the historical activities at the site. In December 2004, a KDHE contractor conducted a Phase II assessment at the site and identified elevated concentrations of lead, cadmium, arsenic, and zinc on the former United Zinc and Chemical Company property. Concentrations of those metals were detected as high as 49,000 milligrams per kilogram (mg/kg) for lead, 380 mg/kg for cadmium, 1,800 mg/kg for arsenic, and 52,000 mg/kg for zinc. The assessment also identified the potential for elevated levels of lead on nearby residential, school, and daycare properties.

In June 2005, KDHE screened the right-of-ways of 50 residential properties around the UZ #1 site. Discrete surface soil samples were collected at each property and analyzed (using both field screening and laboratory methods) for lead, arsenic, cadmium, and zinc. The results of this investigation identified lead-contaminated soils (i.e., exceeding 400 mg/kg) at 36 percent of the properties. Relative concentrations of the other metals of concern typically mimicked the lead levels.

In September 2005, a Preliminary Removal Site Evaluation was conducted by a KDHE contractor at sensitive receptor areas identified during previous investigations. This involved the collection of discrete soil samples from the McKinley Elementary School and the Iola Preschool. Lead concentrations greater than 400 mg/kg were identified in soils on and adjacent to the McKinley Elementary School property; however, no elevated concentrations of metals were found in the samples collected from the Iola Preschool.

#### 3.0 REMOVAL SITE EVALUATION ACTIVITIES

Tetra Tech START conducted sampling activities at the UZ #1 site during the six-week period between April 11 and May 19, 2006, to identify contaminated soils meeting removal criteria. The Tetra Tech START members involved in those activities included Rick Claytor, Andy Haner, and Anthony Brewer. Eddie McGlasson, the EPA Region 7 on-scene coordinator (OSC), was also present during most of the sampling activities. The fieldwork was conducted in accordance with a quality assurance project plan (QAPP) prepared by Tetra Tech START and approved by EPA Region 7. A summary of those activities and the resulting data follows.

#### 3.1 XRF SCREENING

For the RSE, residential properties, schoolyards, parks, and daycare centers were selected for assessment. At each identified property, after receiving consent for access from the owner, Tetra Tech START divided the property into multiple cells for screening purposes. From each cell, a composite sample consisting of nine aliquots was collected from 0 to 2 inches below ground surface (bgs), placed in an aluminum pie pan, and homogenized. Three separate readings for lead were taken of each homogenized sample using a field portable XRF. These readings were recorded on a screening form prepared for each property. The average of these three readings was calculated and also recorded on the screening form (see Appendix B). The property owner was provided a sketch of the property with the lead concentrations identified in each cell.

2

During the RSE, 260 properties were screened. Those properties consisted of 234 residential properties, 15 daycare centers, five public schoolyards, two churches, and four commercial properties. Figure 2 in Appendix A identifies the highest XRF values recorded at each property. At ten residential properties, XRF screening identified lead concentrations in soil exceeding the removal action level of 800 mg/kg. At three of the four commercial properties, XRF screening identified lead concentrations in soil exceeding the removal action level of 1,000 mg/kg for commercial properties. For schools, daycare facilities, and residences where a child with an elevated blood-lead (EBL) level resides, a removal action level of 400 mg/kg was established. XRF readings at two school properties, eight daycare facilities, and one residence where a child with an EBL level lived were greater than 400 mg/kg in surface soils. In all, 24 properties were identified with lead concentrations that supported a time-critical removal action, based on XRF data.

#### 3.2 SOIL SAMPLING FOR XRF CONFIRMATION

In accordance with the QAPP, approximately 10 percent of the screened samples were submitted for laboratory confirmation analyses of arsenic, zinc, cadmium, and lead. The 75 samples selected for submittal to the laboratory (EMA78Q00/3001-1 through 75, including one field duplicate) were placed into 8-ounce glass jars, labeled, and placed into coolers, pending delivery to the EPA Region 7 laboratory in Kansas City, Kansas. Sample collection field sheets and chain-of-custody (COC) records were submitted to the laboratory with the soil samples (see Appendix C).

#### 3.3 SOIL SAMPLING FOR BIOAVAILABILITY STUDY

On June 6, 2006, Mr. Claytor and Mr. Haner returned to Iola to collect multi-aliquot surface soil samples from six properties that had been previously screened and identified as containing elevated lead concentrations. Samples were collected in one cell from each of the six properties (EPA Property IDs 7, 21, 48, 54, 138a, and 223; see Appendix A, Figure 2) in the same manner as previously described. Each soil sample was split, with one split sample submitted to the EPA Region 7 laboratory and the other sent to a laboratory at the University of Colorado in Boulder, Colorado, under contract to Tetra Tech. Both sets of split samples were analyzed to determine the bioavailability of lead in the samples.

#### 4.0 DATA SUMMARY

The data package from the EPA Region 7 laboratory for analyses to confirm the XRF readings is included in Attachment 1. The bioavailability data from the EPA Region 7 laboratory is included in Attachment 2

and the bioavailability data from the University of Colorado laboratory, along with Tetra Tech START's data validation report, is included as Attachment 3. The following sections summarize those laboratory data obtained for the RSE.

#### 4.1 SOIL SAMPLES FOR XRF CONFIRMATION

The EPA Region 7 laboratory in Kansas City, Kansas, analyzed 75 soil samples to determine total concentrations of lead, zinc, arsenic, and cadmium (see Attachment 1). These samples represented approximately 10 percent of the samples screened with the XRF. Table 1 lists the XRF readings and corresponding laboratory results for lead in those samples. XRF readings for lead in those samples ranged from 143 to 1,410 mg/kg, while the laboratory results ranged from 106 to 2,290 mg/kg. Table 1 also contains the laboratory sample numbers and EPA identification numbers of the properties where the samples were collected, along with the addresses, cell numbers, and sample collection dates.

XRF data are considered valid if a comparison between the XRF values and the corresponding laboratory results yields a regression coefficient (r<sup>2</sup>) of at least 0.7. The regression coefficient for the data collected for this RSE was 0.738. Therefore, the remaining XRF readings are considered valid screening level data.

TABLE 1
SUMMARY OF XRF AND LABORATORY LEAD CONCENTRATIONS
UNITED ZINC #1 SITE – IOLA, KANSAS

Sample Number	EPA Property ID	Property Address	Cell Number	Date Collected	XRF Reading (mg/kg)	Lab Result (mg/kg)
1,2&2-FD	2	204 S. Kentucky	1 & 8	4/11/2006	273 - 411	585 (596 & 496)
4	3	300 S. Jefferson	7	4/12/2006	485	501
5	4	700 N. Jefferson	3	4/12/2006	251	263
6 & 7	5	600 East St.	8 & 2	4/12/2006	311 - 216	284 - 223
8 & 10	6	300 E. Jackson	3 & 16	4/13/2006	247 - 211	210 - 228
9	13	304 N. Buckeye	2	4/14/2006	653	961
11	7	Kansas Dr. & Hwy 54	1	4/13/2006	665	736
12	12	605 N. Walnut	2	4/13/2006	333	806
13	10	411 N. Cottonwood	1	4/14/2006	793	869
14	14	19 S. Ohio	3	4/14/2006	492	539
15	28	1282 2,000th	2	4/18/2006	178	135
16	42	423 S. Washington	3	4/19/2006	369	420
17	37	502 S. Jefferson	1	4/19/2006	307	434
18	48	508 South St.	1	4/19/2006	811	2,290
19	39	605 South St.	1	4/19/2006	343	440
20	35	429 S. Kentucky	4	4/20/2006	415	582
21	16	116 S. Ohio	4	4/20/2006	443	745
22	29	18 S. Tennessee	2	4/20/2006	354	571
23	30	20 S. Tennessee	1	4/20/2006	503	681
24	50	1101 N. Sycamore	1	4/21/2006	373	567

## TABLE 1 (Continued) SUMMARY OF XRF AND LABORATORY LEAD CONCENTRATIONS UNITED ZINC #1 SITE – IOLA, KANSAS

Sample	EPA		Cell	Date	XRF Reading	Lab Result
Number	Property ID	Property Address	Number	Collected	(mg/kg)	(mg/kg)
25	56	205 S. 4th	1	4/21/2006	985	1,040
26	58	701 N. Walnut	1	4/24/2006	606	769
27	76	812 N. Walnut	3	4/25/2006	386	1,050
28	64	910 N. Walnut	1.	4/25/2006	575	1,150
29	80	220 S. Kentucky	3	4/25/2006	316	490
30	81	502 Kennedy Dr	4	4/26/2006	180	246
31	67	210 N. 1st	1	4/26/2006	241	288
32	87	316 W. Jackson	1.	4/26/2006	924	1,200
33	102	416 E. Jackson	2	4/27/2006	359	704
34	92	203 S. 2nd	1	4/27/2006	378	556
35	89	230 S. Tennessee	i	4/27/2006	295	417
36	137	417 E. Madison	1	5/1/2006	219	284
37	107	502-504 N. Cottonwood	1	5/2/2006	278	616
38	110	301-303 N. 2nd	1	5/2/2006	165	246
39	142	818-820 Kansas Dr.	2	5/2/2006	167	209
40	144	317 S. Buckeye	1	5/2/2006	356	578
41	144	317 S. Buckeye	3	5/2/2006	556	798 J
42	141	302-304 Eisenhower	1	5/3/2006	175	249
43	148	330-332 Eisenhower	1	5/3/2006	143	106
44	158	426 Eisenhower	1	5/3/2006	149	148
45	156	419-421 Eisenhower	2	5/3/2006	255	342
46	171	702 N. Kentucky	2	5/4/2006	237	282
47	183	402 S. Sycamore	1	5/8/2006	319	530
48	179	302 S. Buckeye	2	5/8/2006	281	411
49	190	510 N. 2nd	1	5/9/2006	238	336
50	185	515 S. Cottonwood	1	5/10/2006	295	397
51	201	514 N. Kentucky	1	5/10/2006	445	764
52	198	427 N. Ohio	1	5/10/2006	421	562
53						
54	205 197	610 N. Ohio	1	5/11/2006	153	186
111003 74	20,000.0	613 N. Ohio	1	5/11/2006	385	504
55	208	502 N. Tennessee	2	5/11/2006	150	258
56	216	309 S. Colborn	1	5/15/2006	359	496
57	218	402 S. Colborn	2	5/15/2006	366	494
58	220	524 S. Oak	1	5/15/2006	639	837
59	221	323 S. Oak	1	5/15/2006	424	614
60	234	5 E. Irwin	2	5/16/2006	647	872
61	229	216 S. 1st	3	5/16/2006	329	362
62	225	221 S. 1st	1	5/16/2006	475	551
63	223	221 E. Elm	1	5/16/2006	1,410	1,960
64	233	422 S. 2nd	1	5/16/2006	326	618
65	237	112 S. 3rd	2	5/16/2006	303	323
66	239	105 S. 3rd	1	5/17/2006	270	386
67	236	101 S. 3rd	2	5/17/2006	442	509
68	248	202 E. Jackson	3	5/17/2006	555	628
69	243	606 N. Buckeye	1	5/17/2006	317	460
70	244	610 N. Buckeye	3	5/17/2006	487	554
71	246	709 N. Buckeye	1,	5/17/2006	415	633
72	246	709 N. Buckeye	3	5/17/2006	1,059	1,360
73	249	201 N. Sycamore	1	5/18/2006	472	585
74	255	307 N. Sycamore	1	5/18/2006	655	844

## TABLE 1 (Continued) SUMMARY OF XRF AND LABORATORY LEAD CONCENTRATIONS UNITED ZINC #1 SITE – IOLA, KANSAS

Sample Number	EPA Property ID	Property Address	Cell Number	Date Collected	XRF Reading (mg/kg)	Lab Result (mg/kg)
75	257	705 N. Sycamore	1	5/18/2006	500	464

Notes:

**EPA** 

U.S. Environmental Protection Agency

ID I Identification Estimated value

J mg/kg

Milligrams per kilogram

XRF

X-ray fluorescence

Based on the laboratory results, ten additional properties were identified where lead concentrations exceeded the aforementioned removal action levels of 400 or 800 mg/kg (where XRF readings were below

400 or 800 mg/kg). Those samples were collected from EPA Property IDs 102 and 183 (daycare facilities), along with 10, 12, 13, 64, 76, 220, 234, and 255 (residences). Consequently, 34 properties were identified where XRF and/or laboratory data indicated lead concentrations warranting a time-critical removal action. Of these 34 properties, 19 are private residences (one where a child with an EBL level resides), ten are daycare facilities, two are elementary schools, and three are commercial properties (see Figure 2 in Appendix A). Table 2 identifies the properties that met criteria for a time-critical removal

TABLE 2 SUMMARY OF PROPERTIES MEETING TIME-CRITICAL REMOVAL CRITERIA UNITED ZINC #1 SITE – IOLA, KANSAS

D		Lead Concentration (mg/kg)			
Property	G) 100 (1				
ID	Classification	XRF <sup>a</sup>	Laboratory	Criteria Met for Time-Critical Removal Action	
2	School	411	585	School/daycare >400 mg/kg (XRF & laboratory)	
3	School	485	501	School/daycare >400 mg/kg (XRF & laboratory)	
7	Commercial	6,443	NS	Commercial >1,000 mg/kg (XRF)	
10	Residential	793	869	Residence >800 mg/kg (laboratory)	
12	Residential	333	806	Residence >800 mg/kg (laboratory)	
13	Residential	653	961	Residence >800 mg/kg (laboratory)	
21	Daycare	1,135	NS	School/daycare >400 mg/kg (XRF)	
41	Residential	1,163	NS	Residence >800 mg/kg (XRF)	
46	Daycare	708	NS	School/daycare >400 mg/kg (XRF)	
48	Residential	1,293	NS	Residence >800 mg/kg (XRF)	
				Residence >800 mg/kg (XRF),	
49	Residential	816	NS	EBL residence >400 mg/kg	
54	Residential	1,443	NS	Residence >800 mg/kg (XRF)	
56	Residential	985	1,040	Residence >800 mg/kg (XRF & laboratory)	
64	Residential	575	1,150	Residence >800 mg/kg (laboratory)	
65	Residential	807	NS	Residence >800 mg/kg (XRF)	
76	Residential	386	1,050	Residence >800 mg/kg (laboratory)	
87	Daycare	924	1,200	School/daycare >400 mg/kg (XRF & laboratory)	
92	Daycare	813 <sup>b</sup>	556	School/daycare >400 mg/kg (XRF & laboratory)	
93	Daycare	459	NS	School/daycare >400 mg/kg (XRF)	
102	Daycare	359	704	School/daycare >400 mg/kg (laboratory)	
103	Daycare	430	NS	School/daycare >400 mg/kg (XRF)	
138a	Commercial	1,405	NS	Commercial >1,000 mg/kg (XRF)	
138c	Commercial	4,000	NS	Commercial >1,000 mg/kg (XRF)	
183	Daycare	337	530	School/daycare >400 mg/kg (laboratory)	
213	Residential	979	NS	Residence >800 mg/kg (XRF)	
220	Residential	639	837	Residence >800 mg/kg (laboratory)	
223	Residential	1,410	1,960	Residence >800 mg/kg (XRF & laboratory)	
232	Daycare	744	NS	School/daycare >400 mg/kg (XRF)	
234	Residential	647	872	Residence >800 mg/kg (laboratory)	
246	Residential	1,059	1360	Residence >800 mg/kg (XRF & laboratory)	
251	Residential	930	NS	Residence >800 mg/kg (XRF)	
254	Daycare	478	NS	School/daycare >400 mg/kg (XRF)	
255	Residential	655	844	Residence >800 mg/kg (laboratory)	
256	Residential	844	NS	Residence >800 mg/kg (XRF)	

#### Notes:

EBL Elevated blood-lead

ID Identification

mg/kg Milligrams per kilogram

NS No corresponding sample collected for laboratory analysis

XRF X-ray fluorescence

a Highest reading obtained for the property

b Re-screening result; initial XRF screening value was 378 mg/kg

#### 4.2 SOIL SAMPLES FOR BIOAVAILABILITY STUDY

Six soil samples containing elevated lead concentrations were split and submitted to the EPA Region 7 laboratory and the University of Colorado (UC) laboratory in Boulder for comparative analysis of bioavailability of lead. These analyses were conducted to determine the percentage of lead in site soils that would theoretically become bioavailable over time (see Attachments 2 and 3). Table 3 summarizes the results of the analyses conducted by both laboratories, along with XRF readings for lead in surface soils where those samples were collected. The EPA laboratory identified bioavailability of lead ranging from 62.8 to 86.5 percent, while the CU laboratory results ranged from 67 to 86 percent. The good correlation between the results from both laboratories supports a conclusion that a significant portion of lead in the soil would be bioavailable.

TABLE 3 SUMMARY OF BIOAVAILABILITY SAMPLING RESULTS UNITED ZINC #1 SITE – IOLA, KANSAS

Sample Number	EPA Property ID	EPA Result for % Relative Lead Bioavailability	UC Result for % Relative Lead Bioavailability	XRF Lead Value (mg/kg)
1	7	62.8	74	6,433
2	138a	70.6	72	1,405
3	21	77.2	85	1,135
4	54	79.8	79	1,557
5	48	86.5	86	1,293
6	223	70.3	67	1,410

Notes:

EPA

U.S. Environmental Protection Agency

ID

Identification

mg/kg UC XRF Milligrams per kilogram University of Colorado

X-ray fluorescence

#### 5.0 CONCLUSIONS

From April 11 to May 19, 2006, Tetra Tech conducted RSE activities at the UZ #1 site, located in Iola, Kansas. Field activities included surface soil sampling and XRF screening of 260 properties throughout Iola. At ten residential properties, XRF screening indicated lead concentrations in soil exceeding the removal action level of 800 mg/kg. XRF readings for lead at three commercial properties exceeded a removal action level of 1,000 mg/kg established for commercial properties. In addition, two school

properties, eight daycare facilities, and one residence where a child with an EBL level lived had soils with lead concentrations greater than 400 mg/kg—the removal action level established for these types of properties. Also, ten additional properties (two daycares and eight residences) were identified by laboratory analysis where lead concentrations exceeded the appropriate removal action level. Consequently, a total of 34 properties were identified where XRF and/or laboratory data indicated lead concentrations warranting a time-critical removal action.

#### 5.1 REMOVAL CONSIDERATIONS

A time-critical EPA-funded removal action appears warranted at 19 private residences (one where a child with an EBL level resides), ten daycare facilities, two elementary schools, and three commercial properties, where lead concentrations in surface soils have been found that exceed site-specific removal action levels. Removal activities at these properties would likely involve excavation and off-site disposal of contaminated soils, along with backfilling and restoration of excavated areas. Removal considerations are summarized in Appendix D.

#### 5.2 PRE-REMEDIAL CONSIDERATIONS

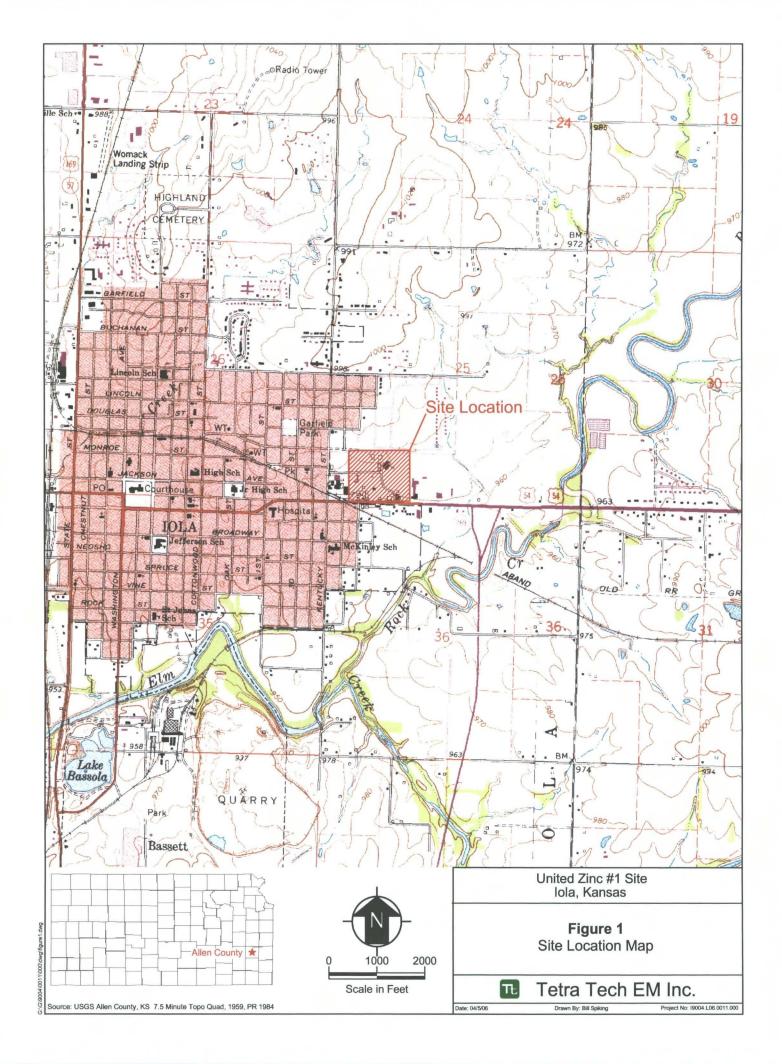
Pre-remedial issues at the UZ #1 site are currently being addressed by a combined Preliminary Assessment and Site Inspection (PA/SI) conducted by Tetra Tech START. Field data accumulated during this RSE will be incorporated into the PA/SI to determine whether further pre-remedial investigation is warranted.

9

## APPENDIX A

## **FIGURES**

(Two Pages)





# APPENDIX B PROPERTY SCREENING FORMS

(265 Pages)

# THE FOLLOWING PAGES HAVE BEEN REMOVED:

18 through 376

# DUE TO CONFIDENTIAL BUSINESS INFORMATION (CBI)

### APPENDIX C

SAMPLE COLLECTION FIELD SHEETS AND CHAIN-OF-CUSTODY RECORDS

(88 Pages)

ASR Number:	3001 Sample Nu	mber: 1	QC Cod	e: Matr	عة الله المانية	ID: 3001-1
Project ID:	EMA78Q00		Proj	ect Manager:	Eddie McGlasso	on .
City:		te sampling		State:	Kansas	
Program; Site Name:	Superfund United Zinc No. 1 -				Site ID: A78Q	<b>Site OU:</b> 00
Location Desc:		PA #2	උ්ල	11 fle	/	
		Externa	ai Sampl	e Number: _		
Expected Conc	c (or Circle	One: Low (	Medium	High)	Date	Time(24 hr
Latitude:		Şamı	ple Colle	ction: Start:	411106	15:15
Longitude:				End:	_/_/_	Water Augustin
Laboratory An	alyses: Preservative	Holding	Time	Analysis		
1 - 1 Liter Cubitainer		Holding ag-C 180	Days	Analysis S. (. 1 Metals in Wate	hby <del>IC</del> P	
Sample Comme	ents:		<del></del>		· · · · · · · · · · · · · · · · · · ·	<del></del>
(N/A)						

273

ŚR Number:	3001	Sample Number	r: 3	QC Co	de:	Matri	53 li x: Water		ス A (D: 3001-7
Project ID:	EMA78	Q00		Pro	ject Mar	nager:	Eddie Mc	Glassor	i
roject Desc: City: Program:	Iola	Zinc No. 1 site sa	mpling		;	State:	Kansas		
Site Name:	•						Site ID:	A78Q	Site OU: 00
ocation Desc:		ε,	D A	ゴス	Ce	119			
			Extern	nal Samı	ole Numb	ber: _			
cpected Conc	:	(or Circle One	: Low	Medium	High)		Date		Time(24 hr)
Latitude:		delegación antiquista de la constante de la co	Sam	ple Coll	ection: S	Start:	4/11/	ی و	15:50
Longitude:						Ēnd:	//	÷	:
.aboratory An	•	1			A 1	·	. (		
Container - 1 Liter Cubitainer		reservative N <del>O3 acidify,</del> 4 Deg C	180	ng iime Days	Analysi 1 Metals	in <del>Water</del>	by ICP		
ample Comme	ents:						-		<del></del>
1/A)									

411.

SR Number: :	3001	Sample Number:	2 <b>Q</b> (	C Code:	Matr	52/id ix: <del>Wate</del> r		<b>'D</b> : 3001-2- <u></u> ∫
Project ID:	EMA78	Q00		Project M	lanager:	Eddie McG	lasson	}
roject Desc: City: Program: Site Name:	Iola Superf		pling		State:	Kansas Site ID: A	1780	Site OU: 00
		E.PA #2	. Ce 1	1/8				
		E	xternal S	ample Nui	mber:			
kpected Conc	:	(or Circle One:	Low Med	dium High)		Date		Time(24 hr)
Latitude:		manufactural analysis	Sample	 Collection	: Start:	41410	6	(5:50
Longitude:					End:	//		
.aboratory An Container - 1- <del>Liten Cubita</del> (men	Pı HH		Holding Tir	n <b>e Ånal</b> oys i Met	ysis δωί als in <del>Wate</del>	ران F by ICP	·····	
ample Comme			7	<u> </u>				
I/A)	1	- a ( - + - 50	La					

SR Number:	3001 Sample Nümber: 4	QC Code:	Matı	では、Water Tag	<b>ID:</b> 3001-4
Project ID:	EMA78Q00	Projec	Manager	: Eddie McGlasso	on
City:		ng	State	: Kansas	
Program: Site Name:	Superfund United Zinc No. 1 -			Site ID: A78Q	Site OU: 00
ocation Desc:	E. PA#3	Ce // 7	7		
	Exte	ernal Sample I	lumber: _		
cpected Conc	(or Circle One: Lo	w Medium Hig	jh)	Date	Time(24 hr)
Latitude:	Sa	ample Collecti	on: Start:	4112100	00:90
Longitude:			End:		
aboratory An	alyses:				
Container - 1-Liter Cubitpiner	Preservative Hole HNO3 acidity, 4 Deg C 1	ding Time A 180 Days 1	n <b>alysis</b> ුද් ( Metals in <del>Wall</del>		
ample Comme					
I/A)					

300 S. Jefferson

485

SR Number:	3001 Sample Number: 5	QC Cod	e: Matr	خی این ا ix: <del>Water</del> T	ag ID: 3001-5
Project ID:		_	ect Manager:	Eddie McGla	ısson
'roject Desc: City: Program:	ìġ	State:	Kansas		
_	United Zinc No. 1 -			Site ID: A	78Q <b>Site OU:</b> 00
ocation Desc:	EPA # 0	( Cel	(3		
	Exte	rnal Sampl	e Number: _		
xpected Conc	(or Circle One: Lov	w) Medium	High)	Date	Time(24 hr)
Latitude:	Sa	mple Colle	ction: Start:	41/2106	(3:30
Longitude:			End:	/	;
.aboratory An		ding Time	Analysis 5	1	
- 1-Liter Cubitainer	HNO3 acidify, 4 Deg C 18		1 Metals in Wate		
ample Comme					
√A)	<del>Z</del> a	$\mathcal{M}$	TE FEBRON		

25(

1. (5 SR Number: 3001 Sample Number: 6 QC Code: \_\_ Matrix: Water Tag ID: 3001-6-\_\_ Project ID: EMA78Q00 Project Manager: Eddie McGlasson 'roject Desc: United Zinc No. 1 site sampling City: Iola State: Kansas Program: Superfund Site Name: United Zinc No. 1 -Site ID: A78Q Site OU: 00 Cell 8 ocation Desc: External Sample Number: \_\_\_\_\_ (or Circle One: Low Medium) High) Date Time(24 hr) xpected Conc: Sample Collection: Start: 4/2/06 Latitude: \_\_\_\_ \_\_\_ Longitude: \_\_\_\_ \_\_\_ .aboratory Analyses: Analysis Sale (c'd)

1 Metals in Water by ICP Container Preservative Hölding Time · 1 Litter Cubitainer HND3 actory, 4 Deg C 180 Days ample Comments: 1/A) 600 East St

3(

AA

•				30 €°	(	
SR Number:	3001 Sample Number:	7 QC Coc	le: Matı	ix: <del> Water</del>	Tag I	<b>D</b> : 3001-7
Project ID:	EMA78Q00	Pro	ject Manager:	: Eddie McG	Glassor	1
roject Desc:	United Zinc No. 1 site sam	pling				
Ćity:	Iola		State	: Kansas		
Program:	•					
Site Name:	United Zinc No. 1 -			Site ID:	A78Q	Site OU: 00
ocation Desc:	EPA #	5 Ce	112			
	E	xternal Samp	le Number:		<del></del>	·
xpected Conc	: (or Circle One:	Low Medium	High)	Date		Time(24 hr)
Latitude:	managaman water and a company of the	Sample Colle	ection: Start:	4/140	(6	(s-13-
Longitude:			End:	//	-	_:_
aboratory An	alyses:					· · · · · · · · · · · · · · · · · · ·
Container	Preservative	Holding Time	Analysis 50	CoCo:		
1 Liter Cubitnion	HNO3 acidify, 4 Deg C	180 Days	1 Metals In Wate	by ICP		
ample Comme	ents:					
J/A)		600	East 5	4		

2(6

گR Number:	1008	Sample Number	: 8	QC Co	de:	Matr	೨೬ (d ix: <del>Wate</del> r		<b>D:</b> 3001-8
Project ID:		-		Pro	oject Ma	nager:	Eddie McC	Slassor	)
'roject Desc: Ĉity: Program:	Iola	d Zinc No. 1 site sai	mpling			State:	Kansas		
Site Name:	•						Site ID:	A78Q	Site OU: 00
ocation Desc:		EPA	#6	<u> </u>	((3				
			Extern	al Samı	ple Nüir	iber: _	<del></del>		
xpected Conc	:	(or Circle One	(Low)	Medium	High)		Date		Time(24 hr)
Latitude:			Sam	ple Coll	ection:	Start:	4/13/0	(	09:30
Longitude:						End:	//	=	naturalis de la compania del compania del compania de la compania del compania del compania de la compania de la compania del compani
.aboratory An	alyse	<b>5:</b>					**************************************		
Container - 1-Liter Cubitaine		Preservative <del>TNO3-acidity</del> , 4 Deg C			Analy I Meta	/sis /sin Wate	,		
ample Commo	ents:		- <del></del>	·····	<del></del>				**************************************
√A)		30	0	E, -	Jac	Lou			

247

SR Number:	3001 <b>Sample N</b>	umber: 9	QC Code:	Matr	ರ್ನ/ಡೆ ix: <del>Water</del> Tag	<b>ID:</b> 3001-9
Project ID:	EMA78Q00 United Zinc No. 1	site sampling	Project M	anager:	Eddie McGlasso	on
City: Program:	Íolä	one sampling		State:	Kansas	
_	United Zinc No. 1	-			Site ID: A78Q	Site OU: 00
ocation Desc:		EAA*13	Ce//.	1		
		Externa	l Sample Nun	nber: _		·
xpected Conc	(or Circ	le One: Low(N	Medium High)		Date	Time(24 hr)
Latitude:		Samp	le Collection:	Start:	4113100	08:55
Longitude:				End:	//	*
aboratory An Container	Preservative	Holding Dég Č 180		y <b>sis</b> کیری ols in W <del>at</del> e	.↓. ¥ by ICP	
ample Comme	ents:			6 4	0	The state of the s
√A)		304	N. Bu	c Key		

653

SR Number:	3001 <b>S</b>	ample Numbe	r: 10	QC Code:	_ Matr	5ം ((d ix: <del>Water</del> Tag	<b>g ID:</b> 3001-10
Project ID:	-		مختلمهم	Project	Manager:	: Eddie McGlass	son
City:	Iola	inc No. 1 site sa	mpung		State:	Kansas	
Program: Site Name:	•					Site ID: A78	Q Site OU: 00
ocation Desc:		٤١	OA #	6 Ce (1	16		
			Extern	al Sample Nu	ımber: _		
xpected Conc	:	(or Circle One	: Łow	, Medium High	1)	Date	Time(24 hr)
Latitude:		<del></del>	Sam	ple Collection	n: Start:	4/13/06	LL:30
Longitude:					End:	/_/	:
.abórátóry An Container - 1 Litas Gybitaine	Pre:	servative G-army, 4 Deg C	<b>Holdir</b> 180	i <b>g Time An</b> Days 1 Mo	<b>aliÿsis</b> فامک étals in W <del>at</del> d		
ample Commo	ents:						
1/A)				,	r		
		3	00	E. Jeck	30m.		

iample Collected By: RC

z l (

SR Number:	3001 Sample Number:	11 QC Code:	Matr	5% (cd ix: <del>Water</del> Tag	<b>ID</b> : 3001-11
Project ID:	EMA78Q00	Project Ma	ınager:	Eddie McGlass	on
City:		npling	State:	Kansas	
Program: Site Name:	Superfund United Zinc No. 1 -			Site ID: A780	Q <b>Site OU:</b> 00
ocation Desc:	٤٦)	4#7 Cell	<u> </u>		
	1	External Sample Num	ber: _		
xpected Conc	: (or Circle One:	Low Medium High)		Date	Time(24 hr)
Latitude:		Sample Collection:	Start:	4/13/06	14:00
Longitude:			End:		* ************************************
.aboratory Ar Container	Preservative	Holding Time Analys	sis 501	<b>ે</b> લ	
- N Liter Gubitaine	<u> Carantes de la companya de la comp</u>	180 Days 1 Metal	ls in Wetc	+ by ICP	÷:
ample Commo √A)		- 10 6 Hs	m) \ 5 - (	f	

SR Number:	3001 Sample Number: 12	2 <b>QC Cod</b> e	:: Matri	<i>5िलि</i> ix: <del>Water</del> Ta	<b>ig ID:</b> 3001-12
Project ID:		-	ect Manager:	Eddie McGlas	sson
City: Program:		mg	State:	Kansas	
_	United Zinc No. 1 -			Site ID: A7	8Q <b>Site OU:</b> 00
ocation Desc:	EAR	1/2 Ce /	1/2		
	Ext	ernal Sample	e Number: _		
xpected Conc	(or Circle One:	ow Medium I	High)	Date	Time(24 hr)
Latitude:	S	Sample Collec	ction: Start:	4/3/06	6:32
Longitude:	annumber and the state of the s		End:		<u></u>
.aboratory An		oldina Tima	81	_	- Water Street, Street
•	#NO3 acidify, 4 Deg C	180 Days	Analysis  1 Metals in Water	by ICP	
ample Commo	ents:		. (		
1/A)		605 X.4	de laut		

3<sup>35</sup>

QC Code: \_\_ Matrix: Water Tag ID: 3001-13-SR Number: 3001 Sample Number: 13 Project ID: EMA78Q00 Project Manager: Eddie McGlasson roject Desc: United Zinc No. 1 site sampling City: Iola State: Kansas Program: Superfund Site Name: United Zinc No. 1 -Site ID: A78Q Site OU: 00 EPA#10 ocation Desc: External Sample Number: \_\_ (or Circle One: Low Medium High) cpected Conc: Date Time(24 hr) Sample Collection: Start: 4/4/06 Latitude: \_\_\_\_\_ End: \_\_/\_\_/\_ Longitude: .aboratory Analyses: Analysis Solid Container Preservative **Holding Time** 1 Metals in Water by ICP · 1 Liter Cubitainer -- HNO3 acidify: 4 Deg C 180 Days ample Comments: 411 N Cofforwood 1/A)

293

iample Collected By: REAH

SR Number:	3001 Sample Number:	14 QC Code: Mat	Sこにも rix: Wa <del>ter T</del> ag I	ID: 3001-14
Project ID:	<del>-</del>	Project Manager	: Eddie McGlassor	n
City:			: Kansas	
_	United Zinc No. 1 -		Site ID: A78Q	Site OU: 00
ocation Desc:	EPA	#/9 Cell3		
	Ex	cternal Sample Number:		
kpected Conc	: (or Circle One:	Low Medium High)	Date	Time(24 hr)
Latitude:		Sample Collection: Start:	41/4/00	13:30
Longitude:		End:		:
aboratory An Container	Preservative I	Holding Time Analysis 5. 180 Days 1 Metals in Wat		
ample Commo				
1/A)		9 5. Ohio		

497

ASR Number: 30	01 <b>Sample Number</b>	: 15 <b>QC C</b> c	ode: Matı	ರ್ವ(id rix: Water Tag	ID: 3001-15
Project ID: E	MA78Q00	Pr	oject Manager	: Eddie McGlass	on
Project Desc: U City: Ic		mpling	State	: Kansas	
_	nited Zinc No. 1 -			Site ID: A780	Q <b>Site OU:</b> 00
Location Desc: _	EPA"	28 <i>Cell</i>	2		
		External Sam	ple Number:	······································	
Expected Conc:	(or Circle One:	Low Medium	n High)	Date	Time(24 hr)
Latitude: _	<del> </del>	Sample Col	lection: Start:	4/18/06	<u>(2 : 15 </u>
Longitude: _	<del></del>		¿End:	//	· _:_
Laboratory Anal	yses:			<u></u>	
Container 1 - 1-Liter-Cubitainer	<b>Preservative</b> HNO3 acidify, 4 Deg C	Holding Time 180 Days	Analysis 1 Metals in Water	t by ICP	·
Sample Commen	ts:				
/NI/A`)	•	•			

ASR Number:	3001 Sample Numbe	r: 16	QC Co	de: I	ろった <sup>へ</sup> Matrix: <del>Water</del>	Tag.ID: 3001-16
Project ID:	~		Pro	ject Mana	ger: Eddie McGl	asson
	United Zinc No. 1 site sa	ampling				
City: Program:				St	ate: Kansas	
•	United Zinc No. 1 -				Site ID: A	78Q <b>Site OU:</b> 00
Location Desc:	E A	A #	42 (	Cell 3	· · · · · · · · · · · · · · · · · · ·	
		Extern	nal Samp	ole Numbe	r:	
Expected Conc	(or Circle One	e: Low	Medium	High)	Date	Time(24 hr)
Latitude:	·	Sam	ple Coll	ection: Sta	art: <u>4/19/06</u>	<u>08:45</u>
Longitude:				E	nd://	_:_
Laboratory An	alyses:					
Container	Preservative	Holdir		Analysis	5-64	
1 - 1- Liter Cubitainer	HNO3-acidify, 4 Deg C	180	Days	1 Metals in	Water by ICP	
Sample Comme	nts:	· · · ·		:		
(N/A)	·					•

ASR Number:	3001 Sample Number	: 17	QC Co	de:	Matri	אי) פּנ. ix: <sub>-Wate</sub> r T	ag ID: 3001-17
Project ID:	<del>-</del>	<del></del>	Pro	ject Mar	nager:	Eddie McGla	esson
_	United Zinc No. 1 site sa	mpling					
City:					State:	Kansas	
Program:	• •					Cito ID: A	700 61- 611-00
Site Name:	United Zinc No. 1 -					Site 1D: A	78Q <b>Site OU:</b> 00
Location Desc:	$\mathcal{E}\mathcal{P}$	A#3	7	Cell	1		
	·	Externa	al Samp	ole Numb	er: _		
<b>Expected Conc</b>	(or Circle One:	: Low I	Medium	High)		Date	Time(24 hr)
Latitude:	· · · · · · · · · · · · · · · · · · ·	Samp	ole Coll	ection: S	Start:	4/19/06	<u>U:15</u>
Longitude:	<del></del>				End:	//	<b>_:</b>
Laboratory An	alyses:						<del></del>
Container	Preservative.	Holding	, Time	Analysi	5 -50 G	4	
1 - 1 Liter Cubitainer	HNO3 acidify, 4 Deg C	180	Days	1 Metals			
Sample Comme	ents:						
(N/A)							·

ASR Number:	3001 Sample Number:	: 18 <b>QC C</b>	ode: Mat	rix: Water Tag	JID: 3001-18		
	Project ID: EMA78Q00 Project Desc: United Zinc No. 1 site sampling		Project Manager: Eddie McGlasson				
City:			State	: Kansas			
Program:		•					
Site Name:	United Zinc No. 1 -			Site ID: A78	Q Site OU: 00		
Location Desc:	EPA	# 48	Cell I				
	1	External San	nple Number:	·			
Expected Conc:	(or Circle One:	Low Mediur	n High)	Date	Time(24 hr)		
Latitude:		Sample Co	llection: Start:	4 14 106	<u>13:35</u>		
Longitude:			End:	//	, <del></del> :		
Laboratory An	-			· <u>- · · · · · · · · · · · · · · · · · ·</u>			
Container	Preservative	Holding Time	Analysis				
1 - 1 Liter Cubitainer	HNO3 acidify, 4 Deg C	180 Days	1 Metals in Wate	er by ICP			
Sample Comme	nts:						
(N/A)							

ASR Number: 30	001 Sample Number:	. 19	QC Co	de:	Matr	ix: Water Tag	<b>1D:</b> 3001-19
Project ID: E	_		Pro	oject Manager: Eddie McGlasson			
Project Desc: U	Inited Zinc No. 1 site sar ola	npling	·		State:	Kansas	
Program: S Site Name: U	uperfund Inited Zinc No. 1 -					Site ID: A780	Q Site OU: 00
Location Desc:	EPA#39	Ce11	11				
		Externa	l Samp	ole Num	ber: _		
Expected Conc:	(or Circle One:	Low N	<b>1</b> edium	High)		Date	Time(24 hr)
Latitude:		Samp	le Coll	ection:	Start:	4119106	15:20
Longitude:					End:	_/_/_	_:_
Laboratory Anal	yses:						
Container 1 - 1 Liter Cubitainer	<b>Preservative</b> HNO3 acidify, 4 Deg C	Holding 180	<b>Time</b> Days	Analys 1 Metals	s <b>is</b> s in Wate	r by IÇP	
Sample Commen	ts:		···· <u>-</u>	-· · <u>-</u>		<del> </del>	
(N/A)							

ASR Number: 30	001 Sample Number:	20	QC Co	de: Mati	rix: Water Ta	ag ID: 3001-20		
-	Project ID: EMA78Q00 Project Desc: United Zinc No. 1 site sampling		Pro	ject Manager	: Eddie McGlasson			
City: I	ola	припу		State	: Kansas			
Program: S Site Name: U	uperfund Inited Zinc No. 1 -				Site ID: A7	8Q <b>Site OU:</b> 00		
Location Desc:	EPA # 35	Cell	4					
	ŧ	Externa	al Samp	ole Number:				
Expected Conc:	(or Circle One:	Low 1	Medium	High)	Date	Time(24 hr)		
Latitude:		Samp	ole Coll	ection: Start:	4 120106	08:25		
Longitude:	<del>.</del>			End:		_:_		
Laboratory Anal	-							
Container 1 - 1 Liter Cubitainer	Preservative HNO3 acidify, 4 Deg C	_		Analysis  1 Metals in Wate	er by ICP			
Sample Commen	ts:			<del> </del>				
(N/A)								

ASR Number: 300	1 Sample Number: 2	21 QC Cod	e: Matr	ix: Water Tag	<b>J ID:</b> 3001-21
Project ID: EM	1A78Q00	Proj	ect Manager:	Eddie McGlass	son
Project Desc: Un City: Iol	ited Zinc No. 1 site samp a	ling	State:	Kansas	
<b>Program:</b> Su <b>Site Name:</b> Un	perfund ited Zinc No. 1 -		•	Site ID: A78	Q Site OU: 00
Location Desc: _	EPA #16 C	ell 4			
	Ex	ternal Sampl	le Number: _		
Expected Conc:	(or Circle One: I	Low Medium	High)	Date	Time(24 hr)
Latitude:		Sample Colle	ction: Start:	4 120106	1 <u>0:15</u>
Longitude: _			End:	_/_/_	:
Laboratory Analy	ses:	- · · · · · · · · · · · · · · · · · · ·			
Container 1 - 1 Liter Cubitainer	Preservative H HNO3 acidify, 4 Deg C	olding Time 180 Days	=	r by ICP	
Sample Comment	s:				· · · · · · · · · · · · · · · · · · ·
(N/A)	•				

ASR Number:	3001	Sample Number:	22	QC Cod	ie: Mati	r <b>ix:</b> Water	Tag I	<b>D:</b> 3001-22
Project ID:	EMA78	Q00		Pro	ject Manager	Eddie McG	lasson	
Project Desc: City:		Zinc No. 1 site san	npling		State	: Kansas		
Program:	•					1		
Site Name:	United	Zinc No. 1 -			•	Site ID:	A78Q	Site OU: 00
Location Desc:		EPA#29	Ce	12				
		ı	Externa	ıl Samp	le Number:		· 	
Expected Conc	:	(or Circle One:	Low I	Medium	High)	Date		Time(24 hr)
Latitude:			Samp	le Colle	ection: Start:	4 120100	e e	<u>14:30</u>
Longitude:					End:	//	-	:
Laboratory An	alyses:	· · · · · · · · · · · · · · · · · · ·			<del></del>			
Container	. Pr	eservative/	Holding	Time	Analysis			
1 - 1 Liter Cubitainer	- HN	O3 acidify, 4 Deg C	180	Days	1 Metals in Wate	er by ICP		
Sample Comme	ents:	· ·						
(N/A)					•			

ASR Number: 3	001 Sample Number:	23	C Code:	Matr	ix: Water Tag	<b>ID:</b> 3001-23
Project ID:	_		Project Ma	anager:	Eddie McGlass	on
Project Desc: City:	United Zinc No. 1 site sar Iola	npling		State:	Kansas	·
Program: Site Name:	Superfund United Zinc No. 1 -				Site ID: A780	<b>Site OU:</b> 00
Location Desc:	EPA #30	Cell	I			·
		External	Sample Nun	nber: _		<del></del>
Expected Conc:	(or Circle One:	Low M	edium High)		Date	Time(24 hr)
Latitude:		Sampl	e Collection:	Start:	4 1 201 de	<u> 15 : 15</u>
Longitude:				End:		:
Laboratory Ana	_					
Container 1 - 1 Liter Cubitainer	Preservative HNO3 acidify, 4 Deg C	Holding 1	•	<b>rsis</b> Is in Wate	r by ICP	
Sample Comme	nts:					<del></del>
(N/A)						

ASR Number:	3001 Sample Number:	24 <b>QC Co</b> o	de: Matr	Solid ix: Water Tag	<b>J ID:</b> 3001-24
Project ID:			ject Manager:	Eddie McGlass	son
City: Program:		npiing	State:	Kansas	
. –	United Zinc No. 1 -			Site ID: A780	Q Site OU: 00
Location Desc:	EPA#50	Cell I			
		External Samp	le Number: _		
Expected Conc	(or Circle One:	Low Medium	High)	Date	Time(24 hr)
Latitude:		Sample Colle	ection: Start:	4 121106	08:30
Longitude:			End:		_:
Laboratory An	-				· , · · · · · · · · · · · · · · · · · ·
Container 1 - 1 <del>Liter Cubitai</del> ner	Preservative <del>HISOS across</del> , 4 Deg C	Holding Time 180 Days	Analysis Silver 1 Metals in Water		
Sample Comme	ents:				

ASR Number: 30	01 Sample Number: 2	25 <b>QC</b> (	Code:	Matrix: Water Ta	<b>g ID:</b> 3001-25
Project ID: Ef	MA78Q00	F	roject Man	ager: Eddie McGlas	son
Project Desc: Un City: Io	nited Zinc No. 1 site samp la	ling		State: Kansas	
Program: St Site Name: Ut	uperfund nited Zinc No. 1 -			Site ID: A78	3Q <b>Site OU:</b> 00
Location Desc: _	EPA # 56 C	I			
	Ex	ternal Saı	mple Numb	er:	
Expected Conc:	(or Circle One:	Low Mediu	ım High)	Date	Time(24 hr)
Latitude: _		Sample Co	ollection: S	tart: <u>4,121,14</u> 6	<u>(I_:30</u>
Longitude: _	<del></del>		.	End://_	_:_
Laboratory Analy	•		••		<u></u>
Container  1 - 1- Liter Cubitainer		olding Time 180 Days	_	ま任 n <del>Wa</del> ter by ICP	
Sample Comment	:s:			· · · · · · · · · · · · · · · · · · ·	
(N/A)				• • •	

ASR Number:	3001 Sample Number	r: 26 <b>QC C</b> c	ode: Matr	rix: <del>Water</del> Ta	g ID: 3001-26
Project ID:	EMA78Q00	Pr	oject Manager:	Eddie McGlas	son
City:	United Zinc No. 1 site sa Iola Superfund	mpling	State:	: Kansas	
Site Name:	United Zinc No. 1 -			Site ID: A78	Q Site OU: 00
Location Desc:	EPA58	cell 1			
		<b>External Sam</b>	ple Number:		
Expected Conc	: (or Circle One	: Low Medium	ո High)	Date	Time(24 hr)
Latitude:		Sample Col	lection: Start:	424106	15.15
Longitude:			End:	_/_/_	_:
Laboratory An Container 1 - 1 Liter Cubitaine 8 oz	Preservative	=	Analysis 1 Metals in Water	er by ICP	
Sample Commo	ents:				
(N/A)					

606

ASR Number:	3001 Sample Number:	27 <b>QC Co</b>	de: Matr	ix: W <del>ate</del> r ・	Tag ID: 3001-27
Project ID: Project Desc:	EMA78Q00 United Zinc No. 1 site sam		ject Manager:	Eddie McGl	asson
City: Program:	Iola	F3	State:	Kansas	
_	United Zinc No. 1 -			Site ID: A	178Q <b>Site OU:</b> 00
Location Desc:	Ef	A 76	Ce((3		
•	. · E	xternal Samp	le Number: _		
Expected Conc:	(or Circle One:	Low Medium	High)	Date	Time(24 hr)
Latitude:		Sample Coll	ection: Start:	4 25/08	09:15
Longitude:	<del></del>		End:	_/_/_	<u></u> :
Laboratory An	- ·				
Container 1 - 1 Liter Cubitainer		Holding Time 180 Days	Analysis  1 Metals in Water	by ICP	·
Sample Comme	nts:				
(N/A)			•		

386

Sample Collected By: RE AH

ASR Number:	3001 Sample Number:	28 <b>QC Code:</b>	Matr	ix: Water Tag	<b>ID:</b> 3001-28
Project ID:	EMA78Q00 United Zinc No. 1 site sam	_	lanager	Eddie McGlasso	on
City:		pinig	State:	Kansas	
Program:	Superfund			•	
Site Name:	United Zinc No. 1 -			<b>Site ID:</b> A780	Site OU: 00
Location Desc:	EP,	464 Cell			
	· E	xternal Sample Nu	mber: _	<del></del>	
Expected Conc	(or Circle One:	Low Medium High)		Date	Time(24 hr)
Latitude:		Sample Collection	: Start:	4 R5106	10:05
Longitude:			End:	//	·:
Laboratory An	alyses:			<del></del>	<del></del>
Container	Preservative	Holding Time Anal	lysis	<b>K</b>	
1 - 1 Liter Cubitaine	HNO3 acidify, 4 Deg C	180 Days 1 Met	als in Wate	by ICP	
Sample Comme	ents:			·	
(N/A)	•				

575

ASR Number:	Sample Number:	29 <b>(</b>	QC Cod	e: Matri	x: Water Tag	ID: 3001-29
Project ID:	EMA78Q00 United Zinc No. 1 site san	molina	Proj	ect Manager:	Eddie McGlasso	n
City:		iipiiiig		State:	Kansas	
Program: Site Name:	Superfund United Zinc No. 1 -				Site ID: A78Q	Site OU: 00
Location Desc:	EPA	9 80	C	13		
		External	Sampl	e Number: _		
Expected Conc	(or Circle One:	Low M	edium	High)	Date	Time(24 hr)
Latitude:		Sampl	e Colle	ction: Start:	4 125/04	06:4)
Longitude:				End:		_:_
Laboratory An	<del>-</del>		<b>-:</b>	A I		
Container  1 - Filter Cubitainer	Preservative HNO3 acidify, 4 Deg C	Holding T		1-Metals in Water	Shi CP	
Sample Comme	ents:					
(N/A)	•					
3(4	•					

ASR Number: 3001 Sample Number: 30 QC Code: \_\_ Matrix: Water Tag ID: 3001-30-Project ID: EMA78Q00 Project Manager: Eddie McGlasson Project Desc: United Zinc No. 1 site sampling State: Kansas City: Iola Program: Superfund Site ID: A78Q Site OU: 00 Site Name: United Zinc No. 1 -Location Desc: \_\_ **External Sample Number: Expected Conc:** (or Circle One: Low Medium High) **Date** Time(24 hr) Sample Collection: Start: 4 \$\mu \subseteq \pi \subsete \ Latitude: \_\_\_\_\_\_\_ Longitude: \_\_\_\_ \_\_\_ End: **Laboratory Analyses:** Analysis

1 Metals in Water by ICP Container **Preservative Holding Time** HNO3 acidify, 4 Deg C 180 Days **Sample Comments:** 

180

(N/A)

Sample Collected By: De Ab

ASR Number: 30	001 Sample Number:	31 <b>QC Co</b>	de: M	ンる(べせ atrix: <del>Wate</del> r Ta	<b>ig ID:</b> 3001-31
Project ID: E	<del>-</del>		oject Manag	er: Eddie McGlas	sson
City: I		npling	Sta	<b>te:</b> Kansas	
Program: S Site Name: U	Superfund Jnited Zinc No. 1 -			Site ID: A78	3Q <b>Site OU:</b> 00
Location Desc:	Et.	A 67 0	Cell 1		
	E	xternal Sam	ple Number:		
Expected Conc:	(or Circle One:	Low Medium	High)	Date	Time(24 hr)
Latitude:		Sample Col	ection: Star	t: 4 <u>26</u> /06	<u> (L: [8</u>
Longitude:	·		En	d://_	_:_
Laboratory Ana	<del>-</del>				
Container  1 - <del>1-Liter Cubitaine</del> r	Preservative HNO3 acidify, 4 Deg C	Holding Time 180 Days	Analysis  1 Metals in-4	Pater by ICP	
Sample Commen	nts:		175t	<del></del>	
(N/A)		2 (0 N			

241

Sample Collected By: 😝 AB

ASR Number: 300	Sample Number: 32	QC Code	: Matr	ix: <del>Wate</del> r Ta	<b>ig ID:</b> 3001-32
Project ID: EM		_	ct Manager:	Eddie McGlas	sson
City: Io		9	State:	Kansas	
Program: Su Site Name: Un	ited Zinc No. 1 -			Site ID: A78	BQ Site OU: 00
Location Desc: _	EP.	187	Cell	1	·
	Exter	nal Sample	Number: _		
Expected Conc:	(or Circle One: Low	v Medium F	ligh)	Date	Time(24 hr)
Latitude:	Saı	mple Collec	tion: Start:	426/06	16:21
Longitude:			End:	_/_/_	_:_
Laboratory Analy	ses:	-			
Container  1 - 1 Liter Cubitainer	Preservative Hold: HNO3 acidify, 4 Deg C 18	=	Analysis 1 Metals in Wate	by ICP	
Sample Comment	s:	- 66AL	· · · · · · · · · · · · · · · · · · ·		
(N/A)	s: 3 (6 G).	Jac 1000	-		

924

Sample Collected By: Rc AB

ASR Number: 30	O01 Sample Number:	33 <b>QC Co</b>	de: Matı	う。(ん rix: <del>Wate</del> r Tag	<b>ID:</b> 3001-33
Project ID:	EMA78Q00	Pro	ject Manager	: Eddie McGlass	son
City: I		npling	State	: Kansas	
Program: S Site Name: U	Jnited Zinc No. 1 -			Site ID: A78	Q Site OU: 00
Location Desc:	El	A 102	Cell.	2	
•	E	xternal Samp	ole Number:		<u> </u>
Expected Conc:	(or Circle One:	Low Medium	High)	Date	Time(24 hr)
Latitude:		Sample Coll	ection: Start:	4 47/06	<u>8:33</u>
Longitude:			End:	//	: <u></u>
Laboratory Ana	- <del>-</del>				
Container  1 - 1 Liter Cubitainer	<b>Preservative</b> HNO3 acidify, 4 Deg C	Holding Time 180 Days	Analysis  1 Metals in Water	(i'd Er by ICP	
Sample Commer	its:				
(N/A)		416 8	Jackson.		

359

ASR Number:	3001 Sample Number:	34	QC Code:	Matr	ix: Water Ta	<b>g ID:</b> 3001-34
Project ID: Project Desc:	EMA78Q00 United Zinc No. 1 site sam	ıplina	Project M	lanager:	Eddie McGlas	son
City: Program:	Iola			State:	Kansas <sup>.</sup>	
_	United Zinc No. 1 -				Site ID: A78	Q <b>Site OU:</b> 00
Location Desc:	EPA	72	Cell			
	E	xterna	Sample Nu	mber: _		
Expected Conc:	(or Circle One:					Time(24 hr)
Latitude:		Samp	le Collection	: Start:	4 17,06	13:30
Longitude:	<del></del>	•		End:	. —/_/_	:
Laboratory An	•					
Container  1 - 1 L <del>iter Cubital</del> ner	<b>Preservative</b> <del>HNO3 acidi</del> fy, 4 Deg C	Holding 180	Days 1 Met	als in	r by ICP	
Sample Comme			<u> </u>			
(N/A)		203	5. 2 nd	<u>.</u>		

378

ASR Number:	3001 Sample Number:	35 <b>QC Code:</b>	Matrix: Water Tag I	<b>ID:</b> 3001-35
Project ID:	EMA78Q00	Project Mana	ager: Eddie McGlassor	า
Project Desc: City:	United Zinc No. 1 site samp Iola	_	tate: Kansas	
Program:	Superfund			
Site Name:	United Zinc No. 1		Site ID: A78Q	Site OU: 00
Location Desc:	ΣP,	189 Cell	(	·
	E	kternal Sample Numbe	er:	
Expected Conc	(or Circle One: (	Low, Medium High).	Date	Time(24 hr)
Latitude:		Sample Collection: St	art: 4 27 106	15:45
Longitude:			ind://	_:_
Laboratory An	alyses:	,		
Container	Preservative 1	Holding Time Analysis	Solid	
1 - 1 Liter Cubitainer	HNO3 acidify, 4 Deg C	180 Days 1 Metals in	Water by ICP	
Sample Comme	ents:			-
(N/A)		230 S. Tem	e15e e_	

195

ASR Number:	3001 Sample Number:	36 <b>QC Code:</b>	<i>Solid</i> Matrix: W <del>ater</del> T	ag ID: 3001-36
Project ID:		_	lanager: Eddie McGla	isson
Project Desc: City:	United Zinc No. 1 site sam Iola	ipiing	State: Kansas	
Program:			Site ID: A	78Q <b>Site OU:</b> 00
Location Desc:	Et	A 137 C	e((*1	
	E	xternal Sample Nu	mber:	<del></del>
<b>Expected Conc:</b>	(or Circle One:	Low Medium High)	Date	Time(24 hr)
Latitude: Longitude:	·	Sample Collection	: Start: <u>5_/_/_0</u> 6 End://_	<i>∟</i> 7. <i>L5</i>
Laboratory And Container 1 - 1 Liter Cubitainer	Preservative	Holding Time Anal	ysis Salid als in <del>Wate</del> r by ICP	
Sample Comme	nts:			
(N/A)				
417 E.	Ma 0 750 m			

219

ASR Number: 30	01 Sample Number:	37 .QC Co	de: Matr	rix: Water Tag I	<b>ID:</b> 3001-37
Project ID: E	MA78Q00 nited Zinc No. 1 site san		ject Manager:	: Eddie McGlassor	Π
City: Id	ola	ipinig	State:	: Kansas	
_	nited Zinc No. 1 -			Site ID: A78Q	Site OU: 00
Location Desc:	EP4	107	Cell	· · · · · · · · · · · · · · · · · · ·	
	I	xternal Samp	ole Number: _		
Expected Conc:	(or Circle One:	Low Medium	High)	Date	Time(24 hr)
Latitude: _	<del></del>	Sample Coll	ection: Start:	512106	08:43
Longitude: _	<del></del>		End:		: <u>_</u>
Laboratory Anal	=				
Container  1 - 1 Liter Cubitainer	Preservative H <u>NQ3 poidif</u> y, 4 Deg C	Holding Time 180 Days	Analysis  1 Metals in Water	t by ICP	
Sample Commen	ts:				
(N/A)					
502-50	4 N. Coffound	cood			

278

Sample Collected By: De A

ASR Number: 30	001 Sample Number:	38 QC Code:	Matr	ぶんし ix: <del>Water</del> Tag	j <b>ID:</b> 3001-38
Project ID:	MA78Q00	Projec	t Manager:	Eddie McGlass	on
Project Desc: U City: Id Program: S		pling	State:	Kansas	
Site Name: U	nited Zinc No. 1 -	·		Site ID: A780	Q <b>Site OU:</b> 00
Location Desc:		/ //o Ce			
		-	,		
Expected Conc:	(or Circle One:	Low Medium Hi	gh)	Date	Time(24 hr)
Latitude: _		Sample Collect	ion: Start:	5/2/06	10:10
Longitude:			End:	//	:
Laboratory Anal	-				
Container			Analysis —SA		
1 - 4 Liter Cubitagrier	HNO3 acidify, 4 Deg C	180 Days 1	Metals in Wate	r by ICP	
Sample Commen				1	
(N/A)		30(-303	N. 2 md	_	

165

ASR Number: 300	Sample Number:	39 <b>QC C</b> d	ode: Matı	So/id rix: <del>Water</del> Tag	<b>ID:</b> 3001-39
Project Desc: Un	IA78Q00 ited Zinc No. 1 site sam		oject Manager	Eddie McGlasso	on
City: Ioi		ipinig	State:	: Kansas	
<b>Program:</b> Su	perfund		•		
Site Name: Un	ited Zinc No. 1 -		,	Site ID: A78Q	Site OU: 00
Location Desc: _	EP,	A 14I	Cell	# 2	
	E	xternal Sam	ple Number:		
Expected Conc:	(or Circle One:	Low Medium	n High)	Date	Time(24 hr)
Latitude:		Sample Col	lection: Start:	5/2/06	13: <u>59</u>
Longitude:	<del></del>		End:	//	_:_
Laboratory Analy	ses:	Ualdina Tima	Analusia		
Container 1 - <del>1 Liter Gubitaine</del> r	Preservative HNO3 acidify, 4 Deg C	180 Days	1 Metals in Water	or by ICP	
Sample Comments					
(N/A)	81	7-820	Evar have	a Da	

162

ASR Number:	3001 Sample Number: 40	QC Code: Matr	ix: Water Tag I	<b>(D:</b> 3001-40
Project ID:	EMA78Q00 United Zinc No. 1 site samplin	Project Manager:	Eddie McGlassor	1
City:	Iola	<del>-</del> '	Kansas	
	United Zinc No. 1 -		Site ID: A78Q	Site OU: 00
Location Desc:	ED,	A 144 Cell =1	/	
	Exte	rnal Sample Number: _		
Expected Conc	(or Circle One: Low	v Medium High)	Date	Time(24 hr)
Latitude:	Sa	mple Collection: Start:	5/2/06	14:50
Longitude:		End:	//	_:_
Laboratory An Container 1 - 1 Liter Cubitoiner	Preservative Hold	iing Time Analysis 366 30 Days 1 Metals in <del>Wate</del>		
Sample Comme	ents:			
(N/A)	2	5 A G		
	3(7	5. Backey	2	•

Sample Collected By: RC

356

ASR Number:	3001	Sample Number:	41	QC Co	de: M	atrix: Water	Tag 1	ID: 3001-41
Project ID:	EMA78	3Q00		Pro	ject Manag	er: Eddie Mc	Glasso	n
Project Desc: City: Program:	Iola	Zinc No. $f 1$ site sanual	npling		Sta	te: Kansas		·
Site Name:	United	Zinc No. 1 -				Site ID:	A78Q	Site OU: 00
Location Desc:			PA Externa	/ <i>/44</i>	Ce ole Number	// <i>3</i>		
Expected Conc	:	(or Circle One:	Low	Medium	High)	Date		Time(24 hr)
Latitude:			Samp	ole Coll		rt: <u>5                                   </u>		15:00
Longitude:	<del></del> -	<u> </u>	<del></del> -			d://_	<del>-</del>	<del>`</del>
Laboratory An Container  1 - 1-Liter Cubitainer	P	: reservative <del>NOS acidify,</del> 4 Deg C	Holding 180	<b>Time</b> Days	Analysis1 Metals in \			
Sample Comme (N/A)	ents:			317	5. Buc	Reye		

556

ASR Number:	3001 Sample Number:	42 <b>QC Code:</b>	اری Matrix: <del>-Water</del> - Tag	g <b>ID:</b> 3001-42
Project ID:	EMA78Q00	Projec	t Manager: Eddie McGlass	son
City:		oling	State: Kansas	
Program: Site Name:	United Zinc No. 1 -		Site ID: A78	Q Site OU: 00
Location Desc:	£1	04 141	Cell 1	
	Ex	cternal Sample	Number:	
Expected Conc	(or Circle One:	Low Medium Hi	gh) <b>Date</b>	Time(24 hr)
Latitude:		Sample Collecti	ion: Start: <u>5/3/8</u> 6	09:05
Longitude:	·		End://	:
Laboratory An Container	· ·	Holding Time A	Analysis Solid	
1 - 1 Liter Cubitainer	**************************************		Metals in Water by ICP	
Sample Comme	ents:		0	
(N/A)	302-30	sy Eisen	hower DR	•

ASR Number: 30	01 Sample Number: 4	13 QC Code	: Matr	ix: <del>Water</del> Tag	<b>ID:</b> 3001-43
Project ID: E	<del>-</del>	-	ect Manager:	Eddie McGlasso	on
Project Desc: U City: Id	nited Zinc No. 1 site samp ola	oling	State:	Kansas	
Program: S				Site ID: A78Q	Site OU: 00
Location Desc:	EPA	148	(e((#(		
	Ex	ternal Sample	Number: _		
Expected Conc:	(or Circle One:	Low Medium H	High)	Date	Time(24 hr)
Latitude: _		Sample Collec	tion: Start:	513106	10:31
Longitude: _	· · · · · · · · · · · · · · · · · · ·		End:	_/_/_	:
Laboratory Anal	yses:				•
Container 1 - 1 titer gubitainer	the state of the s	lolding Time 180 Days	Analysis 50(1) 1 Metals in Water	Soy ICP	
Sample Commen	ts:		. ,		
(N/A)	3	30-332	Eisea hoo	ver DR.	

Sample Collected By: De AH

ASR Number:	3001	Sample Number:	44	QC Cod	e: Mat	کی (زو( rix: ₩ater Tag	<b>ID:</b> 3001-44
Project ID:	EMA78	Q00		Proj	ject Manager	Eddie McGlass	on
City:	Iola	Zinc No. 1 site san	npling		State	: Kansas	
Program: Site Name:	•		•			Site ID: A780	Q <b>Site OU:</b> 00
Location Desc:		EPA 1	158	Ce	((#(		
			Extern	al Samp	e Number:	<del></del>	
Expected Conc	:	(or Circle One:	Low	Medium	High)	Date	Time(24 hr)
Latitude:	·		Sam	ple Colle	ction: Start:	5/3/06	14:18
Longitude:		<u> </u>			End:		_;_
Laboratory An Container 1 - 1 Liter Cubitainer	Pr	eservative <del>103 ecidify,</del> 4 Deg C	Holding 180		Analysis	by ICP	
Sample Comme	ents:						
(N/A)		42	16.	Liseuh	owed Dd		

Matrix: Water Tag ID: 3001-45-\_\_\_ ASR Number: 3001 Sample Number: 45 OC Code: Project ID: EMA78Q00 Project Manager: Eddie McGlasson Project Desc: United Zinc No. 1 site sampling State: Kansas City: Iola Program: Superfund Site Name: United Zinc No. 1 -Site ID: A78Q Site OU: 00 156 Cell # 2 Location Desc: **External Sample Number: Expected Conc:** (or Circle One: Low Medium High) Date Time(24 hr) Sample Collection: Start: 5/3/06 Latitude: \_ \_\_ End: \_\_/\_\_/\_\_ Longitude: \_\_\_ **Laboratory Analyses:** Container **Preservative Holding Time** Analysis 5 HNO3 acidify, 4 Deg C 180 Days 1 Metals in Water by ICP

419-411 Eisenhower Dr

255

(N/A)

Sample Comments:

114

ASR Number: 300	01 <b>Sample Number:</b> 46	QC Code:	Matrix: Water Tag	<b>ID:</b> 3001-46
Project ID: EM	1A78Q00	Project Ma	nager: Eddie McGlass	on
City: Iol		=	State: Kansas	
Program: Su Site Name: Un	•		Site ID: A780	Site OU: 00
Location Desc: _	EPA (	71 Cell	#2	
	Exte	rnal Sample Numi	ber:	·
Expected Conc:	(or Circle One: Low	w Medium High)	Date	Time(24 hr)
Latitude:	Sa	mple Collection: 5	Start: <u>5/8/0</u> 6	15:48
Longitude:	<del></del>		End://	_;
Laboratory Analy Container 1 - 1 Liter Carbitainer	Preservative Hold	ling Time Analys BO Days 1 Metals	is Sala in Water by ICP	
Sample Comments	<del></del>		<u> </u>	
(N/A)	70:	IN Keat	Eucley	

25

ASR Number: 3	3001 Sample Number:	47 <b>QC Cod</b>	le: Matr	ix: Water Tag	<b>ID:</b> 3001-47
Project ID:	EMA78Q00	Pro	ject Manager:	Eddie McGlass	on
City:		npling	State:	Kansas	
Program: Site Name:	Superfund United Zinc No. 1 -			Site ID: A78	Q <b>Site OU:</b> 00
Location Desc:	EPA (	83 Cel	n/# (		
	ı	External Samp	le Number: _		
Expected Conc:	(or Circle One:	Low Medium	High)	Date	Time(24 hr)
Latitude:		Sample Colle	ection: Start:	518106	<u> </u>
Longitude:	·		End:		_:_
Laboratory Ana	alyses:				
Container 1 - 1 <del>-Liter Cubitainer</del> をなる	Preservative	Holding Time 180 Days	Analysis Sold 1 Metals in Wate	by ICP	
Sample Comme	nts:				
(N/A)	•				
	6/21 S. Syc	acrod e		·	

3 (9

ASR Number:	3001	Sample Number:	48	QC Code:	Matr	ろの(さる ix: <del>Water</del> Tag	ID: 3001-48
Project Description		3Q00 Zinc No. 1 site san	nlina	Project Mai	nager:	Eddie McGlass	on
City:	Iola		ipiilig		State:	Kansas	
Program: Site Name:	•					Site ID: A780	Q Site OU: 00
Location Desc:		EPA	17	79 Cell #	*ス		
		E	xterr	nal Sample Numi	ber: _		
Expected Conc	:	(or Circle One:	Low	Medium High)		Date	Time(24 hr)
Latitude:		<del></del>	Sam	ple Collection: S	Start:	518106	<u> 14:47</u>
Longitude:		<del></del> .			End:		<b>:</b>
Laboratory An Container 1 - 1 titer Cupitalites	P			ng Time Analysi Days 1 Metals	301/9	Spby ICP	
Sample Comme			· · · · -				
(N/A)		30	7	S. Back	gey e	<u>.</u>	

28

ASR Number: 3	3001 Sample Number:	49 <b>QC Co</b>	de: Matr	Solid ix: <del>Water</del>	<b>Tag ID:</b> 3001-49		
Project ID: EMA78Q00 Project Desc: United Zinc No. 1 site sampling			Project Manager: Eddie McGlasson				
City: Program:	Iola		State:	Kansas			
<del>-</del>	United Zinc No. 1 -			Site ID:	A78Q <b>Site OU:</b> 00		
Location Desc:	EPA	190 Ce	ell # (				
		external Sam	ple Number: _				
Expected Conc:	(or Circle One:	Low Medium	ı High)	Date	Time(24 hr)		
Latitude:	·	Sample Coll	lection: Start:	51910	6 13:55		
Longitude:	<del></del>		End:	_/_/_			
Laboratory And Container	Preservative	Holding Time 180 Days	Analysis				
Sample Comme	nts:						
(N/A)		co N.	2 ad				

238

ASR Number:	3001 Sample Number:	50 <b>QC Co</b>	de: Matr	Solid ix: Water Tag	<b>ID:</b> 3001-50
Project ID:	EMA78Q00 United Zinc No. 1 site sam		oject Manager:	Eddie McGlasso	n
City: Program:	Iola		State:	Kansas	
_	United Zinc No. 1 -			Site ID: A78Q	Site OU: 00
Location Desc:	EPA	185 C	e (( = (		
	E	xternal Sam	ole Number: _		
Expected Conc	(or Circle One:	Low Medium	High)	Date	Time(24 hr)
Latitude:	· ·	Sample Coll	ection: Start:	5/0/06	<u>09: 03</u>
Longitude:			End:		<del>:</del>
Laboratory An Container 1 - 1 Liter Cubitains	Preservative	Holding Time 180 Days	Analysis  1 Metals in Water	·( + by ICP	
Sample Comme	•				
(N/A)	5	155	Coffonwa	90 S	

195

ASR Number:	3001 Sample Num	<b>ber:</b> 51 <b>(</b>	2C Code: M	ے (زط <b>atrix:-<del>Wat</del>e</b> r	<b>Tag ID:</b> 3001-51
Project ID:	EMA78Q00		Project Manag	er: Eddie McG	lasson
Project Desc: City: Program:		e sampling	Sta	<b>te:</b> Kansas	
_	United Zinc No. 1 -			Site ID:	A78Q <b>Site OU:</b> 00
Location Desc:	٤)	PA 20	Cell #1		·
	·	External	Sample Number		
Expected Conc	(or Circle (	One: Low Me	edium High)	Date	Time(24 hr)
Latitude:	<del></del>	Sample	Collection: Star	rt: <i>\$/6/6</i>	6 13:06
Longitude:			En	d: '//	:
Laboratory An	alyses: Preservative	Holding T	ime Analysis		
1 - 1 <del>Liter Cubitaine</del> r Fo Z	HNO3 acidity, 4 Deg	_	Α	g (i'd <del>Yate</del> r by ICP	
Sample Comme	ents:				
(N/A)		514 1	1. Koufack	EY .	

ASR Number:	3001	Sample Number:	52	QC Code:	Matri	ふんd ix: <del>Wat</del> er		( <b>D:</b> 3001-52
Project ID:	EMA78	Q00		Project Ma	nager:	Eddie Mc	Glassor	n
City:	Iola	Zinc No. 1 site san	npling		State:	Kansas		
Program: Site Name:	•					Site ID:	A78Q	Site OU: 00
Location Desc:		EPA 19	18	Cell# 1				·····
		i	Extern	al Sample Num	ber: _			
Expected Conc	:	(or Circle One:	Low	Medium High)		Date		Time(24 hr)
Latitude:		<del></del>	Sam	ple Collection:	Start:	5/10/0	6	15:50
Longitude:					End:		_	_:_
Laboratory An Container 1 - 1 Liter Cubitainer	Pı	r <b>eservative</b> <del>103 acidif</del> y, 4 Deg C	Holdin 180	g Time Analys Days 1 Metals	is کارز in <del>Water</del>	by ICP		
Sample Comme	nts:							
(N/A)			42	7 N. Ohil	ð			·

ASR Number:	3001 Sample Number:	53 <b>QC C</b>	ode: Matr	ix: Water Tag	<b>ID:</b> 3001-53
Project ID:	EMA78Q00	Pr	oject Manager:	Eddie McGlasso	n
Project Desc: City: Program:		pling	State:	Kansas	
_	United Zinc No. 1 -			Site ID: A78Q	Site OU: 00
Location Desc:	EPA	205 (	Tell#1		
	· E	xternal Sam	ple Number: _		
Expected Conc	(or Circle One:	Low Mediur	n High)	Date	Time(24 hr)
Latitude:		Sample Co	lection: Start:	5/11/06	08:47
Longitude:			End:		<b>:</b>
Laboratory An Container 1 - 1 <del>ditor Cubitainer</del>	<b>alyses:</b> Preservative  HNO3 acidffy, 4 Deg C			(d by ICP	
Sample Comme	ents:				
(N/A)		610 1	U ohic	)	•

•

ASR Number:	3001	Sample Number:	54	QC Co	de: Mat	رة) rix: <del>-Water</del>	Tag I	<b>(D:</b> 3001-54
Project Desc:		3Q00 Zinc No. 1 site sam	nlina	Pro	ject Manager	: Eddie Mc	Glassor	1
City:	Iola		ipiirig		State	: Kansas		
Program: Site Name:						Site ID:	A78Q	Site OU: 00
Location Desc:		EP14	1	197 (	Ce((#		· ·	
		E	xtern	al Samp	ole Number:	<del></del>	·	
Expected Conc	:	(or Circle One:	Low	Medium	High)	Date		Time(24 hr)
Latitude:	<del></del>		Sam	ple Coll	ection: Start:	5/11/6	26	09:10
Longitude:					End:	_/_/_	_	:_
Laboratory An Container 1 - 1 Liter Cubitainer	P	: r <b>eservative</b> <del>NO3 acidify</del> , 4 Deg C		<b>g Time</b> Days	Analysis 1 Metals in Water	by ICP		
Sample Comme	ents:							
(N/A)			60	13 N	1. ohio			

385

ASR Number:	3001	Sample Number:	55	QC Co	de:	Matr	ix: <del>Wate</del> r	Tag Ii	<b>):</b> 3001-55
Project Desc:		3Q00 Zinc No. 1 site san	nlina	Pro	ject Man	ager:	Eddie McG	lasson	
City:	Iola		ipiiiig			State:	Kansas		
Program: Site Name:	-						Site ID:	478Q	Site OU: 00
Location Desc:		EP.	A	208	Ce((	#2			
		ŧ	Exterr	nal Samp	le Numb	er: _			
Expected Conc	:	(or Circle One:	Low	Medium	High)		Date	•	Time(24 hr)
Latitude:		<del></del>	Sam	ple Coll	ection: S	tart:	514108	6	14:05
Longitude;						End:	//		:
Laboratory An Container	-	: reservative	Holdir	ng Time	Analysis	زم سه ۶			
1 - 1_Liter_Cubitainer	r <del>-11</del>	NO3 acidify, 4 Deg C	180	Days	Analysis 1 Metals i	in-Wate	by ICP		
Sample Comme	ents:		·						
(N/A)				501	_ ((	Te	auesso	<u>e</u>	

150

ASR Number: 3	001 Sample Number	: 56 <b>(</b>	QC Code:	ری Matrix <del>- Wa</del>	ter Tag	<b>ID:</b> 3001-56
Project ID: 6	MA78Q00	<del> </del>	Project Ma	<b>anager:</b> Eddie	McGlasso	n
City: I Program: S	Superfund	mpling		State: Kansa		
Site Name: (	Inited Zinc No. 1 -			Site	<b>ID:</b> A78Q	Site OU: 00
Location Desc:	SPA	21le	CI			
		External	Sample Nun	nber:	·	<u></u>
Expected Conc:	(or Circle One:	Low Me	edium High)	Da	te	Time(24 hr)
Latitude:		Sample	e Collection:	Start: <u>5//</u>	5106	U:5
Longitude:				<b>End:</b> /_	_/_	<u></u> :
Laboratory Ana Container 1 - 1 Liter Subitainer	lyses: Preservative HNO3 acidify, 4 Deg C	Holding T		r <b>sis</b> Solo los in water by ICP		· · · · · · · · · · · · · · · · · · ·
Sample Commen	ts:	· .		<del></del>		<del></del>
(N/A)		ng 5	Colhor	a		

359

Tag ID: 3001-57-\_\_ QC Code: \_\_\_ Sample Number: 57 Matrix: Water ASR Number: 3001 Project Manager: Eddie McGlasson Project ID: EMA78Q00 **Project Desc:** United Zinc No. 1 site sampling State: Kansas City: Iola Program: Superfund Site Name: United Zinc No. 1 -Site ID: A78Q Site OU: 00 C2 **Location Desc: External Sample Number:** (or Circle One: Low Medium High) Date **Expected Conc:** Time(24 hr) Sample Collection: Start: 5/15/06 Latitude: Longitude: End: \_\_/\_\_/\_\_ **Laboratory Analyses:** Container **Preservative Holding Time** Analysis Sold

1 Metals in Water by ICP 1 - 1 Litter Cubitainer HNO3 acidify, 4 Deg C Sample Comments: 402 5 Calborn (N/A)

366

ASR Number:	3001	Sample Nu	ımber:	58	QC Cod	de: Ma	مر)،ک <del>Wate ا</del> atrix	는 Tag I	<b>ID:</b> 3001-58-	:
Project ID: Project Desc:		•	site sam	nlina	Pro	ject Manag	<b>er:</b> Eddie M	cGlassor	n	
City: Program:	Iola			· F · · · · · · · ·		Sta	te: Kansas			
Site Name:	-		<b>-</b>				Site ID	: A78Q	Site OU: 00	I
Location Desc:	EI	PA 220	CI							
	٠.		E	xtern	al Samp	le Number:			<del></del>	_
Expected Conc	:	(or Circl	e One:	Low	Medium	High)	Date		Time(24 h	ır)
Latitude:	. <del></del> _			Sam	ple Coll	ection: Star	t: 5/15/	06	13:35	
Longitude:						Ene	d://		_:_	
Laboratory An Container	Pı	reservative			i <b>g Time</b> Days	Analysis 1 Metals in W	S(, d			
Sample Comme	ents:									
(N/A)		5	24 S.	OAI	K					
639			·							

ASR Number: 3	001 Sample Number:	59 <b>QC Co</b>	de: Matr	Sild ix: <del>Water</del> 1	Гад <b>ID:</b> 3001-59
Project ID:	EMA78Q00	Pro	ject Manager:	Eddie McGla	asson
Project Desc: City:	United Zinc No. 1 site sam Iola	npling	State:	Kansas	
Program: Site Name:	Superfund United Zinc No. 1 -			Site ID: A	78Q <b>Site OU:</b> 00
Location Desc:	EPA 221 Cl				
		External Samp	le Number: _	··	·
<b>Expected Conc:</b>	(or Circle One:	Low Medium	High)	Date	Time(24 hr)
Latitude:		Sample Colle	ection: Start:	5115106	16:00
Longitude:			End:	//	:_
Laboratory Ana	lyses:			<del></del>	
Container 1 - 1 Liter Cubitoiner	<b>Preservative</b> HNO3 acidify, 4 Deg C	Holding Time 180 Days	Analysis  1 Metals in Wate	by ICP	
Sample Comme	nts:				
(N/A)	33	23 SOAK			

ASR Number: 30	001 Sample Number:	60 QC Code: Ma	کو (زط trix: ﷺ Tag	ID: 3001-60			
Project ID: E	MA78Q00 Inited Zinc No. 1 site sam	•	Project Manager: Eddie McGlasson				
City: Id	ola	·	e: Kansas				
Site Name: U	Inited Zinc No. 1 -		Site ID: A780	Q Site OU: 00			
Location Desc:	EPA 234 CZ						
	E	xternal Sample Number:		<u> </u>			
Expected Conc:	(or Circle One:	Low Medium High)	Date	Time(24 hr)			
Latitude:		Sample Collection: Start	: <u>5/16/06</u>	<b>08</b> :30			
Longitude:	<del></del>	End	: _/_/_	<b>_:</b> _			
Laboratory Anal Container 1 - 1 Liter Cubitainer	=	Holding Time Analysis	€ hter by ICP				
Sample Commen	ts:	,					
(N/A)	5 E IRN	IN					

ASR Number:	3001 Sample Number:	61	QC Code	e: Matr	ix: <del>Wate</del> r	Tag ID: 3	001-61
Project ID:			Proj	ect Manager:	Eddie McGl	asson	
City:		npling		State:	Kansas		
Program: Site Name:	Superfund United Zinc No. 1 -				Site ID: A	.78Q <b>'Site</b>	: <b>OU:</b> 00
Location Desc:	EPA 229 C3						
	ı	Externa	l Sampl	e Number: _			<del></del>
Expected Conc:	(or Circle One:	Low M	1edium	High)	Date	Ti	me(24 hr)
Latitude:		Samp	le Colle	ction: Start:	5116106	10	: <u>25</u>
Longitude:	<del></del>			End:	_/_/_		· <u></u>
Laboratory And Container	Preservative	Holding 180		Analysis 1 Metals in <del>Wate</del>	t by ICP		
1 - <del>1 Liter Cubitaine</del> r Sample Comme							
(N/A)		uc s	15 21		,		

Sample Collected By: Republic Aff

ASR Number: 300	Sample Number: 6	2 <b>QC Co</b> c	ie: Matr	ix⊦ <del>Water</del> Tag	<b>ID:</b> 3001-62
Project ID: EN	1A78Q00 hited Zinc No. 1 site sampl	•	ject Manager:	Eddie McGlass	on
City: Iol	la .	9	State:	Kansas	
_	nited Zinc No. 1 -		·	Site ID: A780	<b>Site OU:</b> 00
Location Desc: _	EPADOS CI				
	Ext	ternal Samp	le Number: _		:
Expected Conc:	(or Circle One: L	ow Medium	High)	Date	Time(24 hr)
Latitude: _		Sample Colle	ection: Start:	5/16/06	11:05
Longitude: _	· · · · · · · · · · · · · · · · · · ·		End:	//	_:
Laboratory Analy	ses:				
Container 1 - 1 Liter Cubitainer	Preservative Ho HNO3 acidify, 4 Deg C	olding Time 180 Days	Analysis  1 Metals in Wate	by ICP	
Sample Comment	s:				
(N/A)	221 S /5	<i>5</i> 7.			
1,76				·	

ASR Number:	3001	Sample Nu	ımber:	63	QC Cod	le: M	4atri:	ح. (را x: <del>Water</del>	( Tag I	<b>ID:</b> 3001-63
Project ID: Project Desc:		_	site sam	plina	Pro	ject Manaç	ger:	Eddie McG	Slassor	1
City: Program:	Iola					Sta	ate:	Kansas		
Site Name:								Site ID:	A78Q	Site OU: 00
Location Desc:	<u> </u>	77 223	C	1						
			٤. ٤	xterna	l Samp	le Number	r:	·		· · · · · · · · · · · · · · · · · · ·
<b>Expected Conc</b>	:	(or Circl	e One:	Low M	ledium	High)		Date		Time(24 hr)
Latitude:				Samp	le Colle	ection: Sta	rt:	5/16/0	6	13:05
Longitude:		<del></del>				En	nd:			<b>_:</b> _
Laboratory An Container 1 - 1 Liter Cubitainer	P	t reservative NO3 acidify, 4 l				4	S (	by ICP		
Sample Comme				· · · · · · · · · · · · · · · · · · ·	· ·	······································		<u> </u>	-	
(N/A)		221	SELA	5T.						

ASR Number: 300	1 Sample Number:	64 <b>QC Cod</b>	e: Matr	ix: Water Tag	<b>ID:</b> 3001-64
Project Desc: Uni	A78Q00 ted Zinc No. 1 site sam	•	ect Manager:	Eddie McGlasso	n .
City: Iola Program: Sur		pg	State:	Kansas	
Site Name: Uni				Site ID: A78Q	Site OU: 00
Location Desc: [A	223 CI				
	Ε	xternal Sampl	e Number: _		
Expected Conc:	(or Circle One:	Low Medium	High)	Date	Time(24 hr)
Latitude:	<del></del>	Sample Colle	ction: Start:	5 116 166	<u> 14 : 55</u>
Longitude:	<u> </u>		End:	//	_:_
Laboratory Analys Container 1 - 1 Liter Cubitainer		<b>Holding Time</b> 180 Days	Analysis 1 Metals in Wate	by ICP	
Sample Comments (N/A)	: 422	5.2 nd ST			

٠.

ASR Number: 3001	Sample Number: 65	QC Code: Ma	がんして trix: <del>Water</del> Tag	<b>ID:</b> 3001-65
Project ID: EM/	-	Project Manage	r: Eddie McGlass	on
City: Iola Program: Sup Site Name: Unit	erfund		e: Kansas Site ID: A780	Q <b>Site OU:</b> 00
	EPA 237 C2			
· •	Extern	al Sample Number:		
Expected Conc:	(or Circle One: Low	Medium High)	Date	Time(24 hr)
Latitude:	Sam	ple Collection: Start	: 516106	<u> 16:55</u>
Longitude:	<del></del>	End	: _/_/_	: <u>_</u> _
Laboratory Analys Container 1 - 1 Siter Cubitainer	•	g Time Analysis Days 1 Metals in <del>Wa</del>		
Sample Comments:		<del></del>		
(N/A)	112 S 3 = 9	ÎT.		

ASR Number: 3	3001 Sample Number:	66 <b>QC C</b>	ode: Mat	ے (رط rix: <del>Water</del> Tag	<b>ID:</b> 3001-66	
Project ID: Project Desc:		Project Manager: Eddie McGlasson				
City: Program:	Iola	, 3	State	: Kansas		
	United Zinc No. 1 -			Site ID: A780	Q <b>Site OU:</b> 00	
Location Desc:	EPA 239 CI					
· ·	1	External Sam	ple Number:			
Expected Conc:	(or Circle One:	Low Mediun	n High)	Date	Time(24 hr)	
Latitude:		Sample Col	llection: Start:	5117106	08:45	
Longitude:	· ·		End:	//	_:_	
Laboratory Ana		11-1-1	A			
Container  1 - 1 Liter Cubitainer	Preservative HNO3 acidify, 4 Deg C	Holding Time 180 Days	=	er by ICP		
Sample Comme	nts:		·			
(N/A)		105 5	320 CT			

ASR Number: 3001	Sample Number: 67	QC Code: Mati	ix: Water Tag	<b>ID:</b> 3001-67
Project ID: EMA7	· ·	Project Manager	Eddie McGlasso	on n
Project Desc: Unite City: Iola Program: Supe	d Zinc No. 1 site sampli rfund	_	: Kansas	·
Site Name: Unite			Site ID: A78Q	Site OU: 00
Location Desc: LP	4236 CZ			
	Ext	ernal Sample Number:		
Expected Conc:	(or Circle One: Lo	ow Medium High)	Date	Time(24 hr)
Latitude:	s	ample Collection: Start:	5117106	0 <u>9</u> :31
Longitude:	· · · · · · · · · · · · · · · · · · ·	End:	_/_/_	<b>:</b> _
		Iding Time Analysis 180 Days 1 Metals in Water	by ICP	
Sample Comments:				
(N/A)	101	S. 3rd St.		

ASR Number:	3001 <b>Sa</b> i	mple Number:	68	QC Code:	Matr	ix: Water	Tag I	<b>D:</b> 3001-68
Project ID:	EMA78Q00	)		Project M	anager:	Eddie McC	Glassor	1
Project Desc: City: Program:	Iola		npling	. *	State:	Kansas		
Site Name:	United Zin	c No. 1 -				Site ID:	A78Q	Site OU: 00
Location Desc:	EPA	248	C3					· · ·
		E	Externa	al Sample Nun	nber: _			
<b>Expected Conc</b>	:	(or Circle One:	Low	Medium High)		Date		Time(24 hr)
Latitude:	·		Samı	ole Collection:	Start:	5/17/00	4	<u>/o :30</u>
Longitude:					End:	_/_/_	<u>ن</u>	_:_
Laboratory An Container 1 - 1 Liter Cubitainer	Prese	rvative acidify, 4 Deg C		Time Analy Days 1 Meta	sis کی(ر als in water	€ E-by ICP		
Sample Comme	ents:			-		·		
(N/A)		2	102 E	JACKSON			•	

AH

ASR Number:	3001 <b>S</b> a	ımple Number:	69	QC Cod	le:	Matr	ix: <del>Wate</del> r Ta	<b>ig ID:</b> 3001-69
Project ID:		0 nc No. 1 site san	nolina	Pro	ject Maı	nager:	Eddie McGlas	son
City:	Iola		, pg			State:	Kansas	,
Program: Site Name:							Site ID: A78	SQ Site OU: 00
Location Desc:	EPA	243	CI			· .		
· · · · · · · · · · · · · · · · · · ·		i	Extern	al Samp	ie Numt	oer: _	<del></del>	
Expected Conc	:	(or Circle One:	Low	Medium	High)		Date	Time(24 hr)
Latitude:		<del></del>	Sam	ple Colle	ection: S	Start:	5117106	12:00
Longitude:						End:	//	<b>:</b>
Laboratory An Container 1 - 1 Liter Cubitainer	Pres	•	Holdin 180	<b>g Time</b> Days	Analysi 1 Metals	is So (	r by ICP	
Sample Comme							<del></del>	
(N/A)			60	1. N. Buc	KEK		·	

317

Sample Collected By: 飛んん

ASR Number:	3001 Sample Number:	70	QC Cod	le: Matr	ix: <del>Water</del>	Tag I	( <b>D:</b> 3001-70
Project ID:	EMA78Q00		Pro	ject Manager:	Eddie McG	lassor	1
City: Program:		npling		State:	Kansas Site ID:	A78Q	<b>Site OU:</b> 00
Location Desc:	EPA 244	<i>C3</i>	<del></del>		·		
•	1	Extern	al Samp	le Number: _			
Expected Conc	(or Circle One:	Low	Medium	High)	Date		Time(24 hr)
Latitude:	·	Sam	ple Colie	ection: Start:	5/17/00	6	12:40
Longitude:	<u> </u>		•	End:			:_
Laboratory An		<del></del>					
Container 1 - 1 Liter Cubitaine	Preservative HNO3-acidify, 4 Deg C		<b>g Time</b> Days	Analysis  1 Metals in Water	by ICP		
Sample Comme	ents:		······································				
(N/A)		610	NBU	ickeye			

487

ASR Number:	3001 Sample Number:	71	QC Cod	le: l	Matri	x: <del>Water</del>	Tag I	<b>D:</b> 3001-71
Project ID:			Pro	ject Mana	ger:	Eddie McG	lasson	!
City:		npiing		St	tate:	Kansas		
Program: Site Name:	United Zinc No. 1 -					Site ID: A	178Q	Site OU: 00
Location Desc:	E1A 246	CI			· · ·			
•,	1	Extern	al Samp	le Numbe	er: _	··-	<u>.</u>	
Expected Conc:	(or Circle One:	Low	Medium	High)		Date		Time(24 hr)
Latitude:		Sam	ple Colle	ection: Sta	art:	5117106	,	/3 US
Longitude:	<del></del> ·			. <b>E</b>	ind:			_:_
	alyses: Preservative _HNO3 acidify, 4 Deg C				Wale	by ICP		
Sample Comme								
(N/A)	•		N.					
		109	Buck	EYE				

ASR Number: 30	01 Sample Number:	72	QC Cod	de: M	latrix:	₩ater		<b>ID:</b> 3001-72
Project ID: El	MA78Q00		Pro	ject Manag	ger: Ed	ddie McC	Glassor	า
Project Desc: Un City: Io Program: Su	•	pling		Sta	ate: Ka	ansas		
•	nited Zinc No. 1 -				S	ite ID:	A78Q	Site OU: 00
Location Desc: &	PA 246	C3					· · · · · · · · · · · · · · · · · · ·	
	E	xtern	al Samp	le Number	:		_	
Expected Conc:	(or Circle One:	Low	Medium	High)		Date		Time(24 hr)
Latitude: _		Sam	ple Coll	ection: Sta	rt: 💆	5/17/00	,	1 <u>3</u> :10
Longitude: _	<del>_</del>			Eņ	nd: _			_:
Laboratory Analy Container 1 - 1 Liter Cubitainer	Preservative		<b>g Time</b> Days	Analysis ع	ر ر <del>Wate</del> r by	/ ICP		
Sample Comment	s:							
(N/A)		70	9 N.	BUCKEY	E			

ASR Number: 30	01 Sample Number:	73 <b>QC Co</b>	de: Matr	કુ(હિ ix:₩ater Tag	<b>ID:</b> 3001-73
Project ID: El	1A78Q00	Pro	oject Manager:	Eddie McGlasso	n
City: Io Program: Su	ıperfund	pling	State:	Kansas	
Site Name: Ur	nited Zinc No. 1 -		•	Site ID: A78Q	Site OU: 00
Location Desc: _	EPA 249 C	1			
	E	xternal Sam	ple Number: _		·
<b>Expected Conc:</b>	(or Circle One:	Low Medium	High)	Date	Time(24 hr)
Latitude: _	<del></del>	Sample Coll	ection: Start:	5/18/06	08 25
Longitude: _	<del>_</del>		End:	_/_/_	
Laboratory Analy		·		<u> </u>	
Container  1 - 1 Liter Cubitainer	Preservative "HNO3 acidify, 4 Deg C	Holding Time 180 Days	Analysis  1 Metals in Wate	÷by ICP	1
Sample Comment	s:			<del></del>	
(N/A)		a) Class			

ASR Number: 3001	Sample Number: 74	QC Code: Ma	trix: Water Tag	<b>ID:</b> 3001-74
Project ID: EMA		Project Manage	r: Eddie McGlasso	on
City: Iola Program: Supe	ed Zinc No. 1 site samplir erfund		e: Kansas	
Site Name: Unite	· ·		Site ID: A780	Site OU: 00
Location Desc:	PA 255 CI	•		
	Exte	ernal Sample Number:		·····
Expected Conc:	(or Circle One: Lo	w Medium High)	Date	Time(24 hr)
Latitude:	Sa	ample Collection: Start	· 5/18/06	10:15
Longitude:	· · · · · · · · · · · · · · · · · · ·	End		<b>:</b>
		ding Time Analysis 80 Days 1 Metals in We	(d ter-by ICP	
Sample Comments:				
(N/A)	307	N SYCAMORE		

ASR Number: 300	1 Sample Number:	75. <u> </u>	QC Code:	Matrix: Water	Tag ID: 3001-75
Project ID: EM	1A78Q00		Project Man	ager: Eddie Mc	Glasson
Project Desc: Un	ited Zinc No. 1 site sam	pling			
City: Iol	a ·		9	State: Kansas	
Program: Su	perfund				
Site Name: Un	ited Zinc No. 1 -	_		Site ID:	A78Q <b>Site OU:</b> 00
		57		· ·	
Location Desc: _	EPAZZ	55	Ge ( (		
	E	xternal	Sample Numb	er:	
Expected Conc:	(or Circle One:	Low M	edium High)	Date	Time(24 hr)
Latitude: _	·	Sampl	e Collection: S	tart: 5/8/0	6 12:55
Longitude:			·	End://_	:-
Laboratory Analy	ses:			<u> </u>	
Container	Preservative	Holding 1	Time Analysis	<b>s</b> lid	
1 - 1 Liter Cubitainer	HNO3_acidify <sub>7</sub> -4 Deg C	180	Days 1 Metals i	in <del>Water b</del> y ICP	
Sample Comments	s:				
(N/A)		e XI	Sycamo	de	

.

ACTIVITY LEADER(P	rint)	100	NAME	OF SURVE	EY OR ACTIVIT	Y	-	ر ہے		DAY MONTH YEAR	SHEET
ACTIVITY LEADER(P	de/	c 67 (ass	ica	Uni	ted E	40	_	1		DAY MONTH YEAR	of (
CONTENTS OF SHIP	MENT			1.						i	
SAMPLE		805	E OF CONTAIN	T	VOA SET	<del>  -                                   </del>	SAMP		MEDIA othe		MATION
NUMBER .	CUBITAINER	BOTTLE BERS OF CON	BOTTLE TAINERS PER S	BOTTLE SAMPLE NUM	(2 VIALS EA) BER	water	sorí	sediment	dust	(condition of samples upo other sample numbers.	n receipt, etc.)
EMA78000-		ı					×				
- 2		(					k				
-1.50		1					x				
-4		l					X				
-5		1					X				
-6		1					X				
-7		(					X	_			
-8		l		<u> </u>			X		_ _		
-9		- (	ļ			1	X	_			
-10		1		<u> </u>			X		_		
-11		( -				_	ᅩ	_		<u> </u>	
-/2						↓_	X	_		<u> </u>	
-13		!		<u> </u>		ļ.,	$ \lambda $	_			
-14			,	<u> </u>		-	X	_		<u> </u>	
						+	$\vdash$	_	_	***	
				<u> </u>	_	$\perp$	$\vdash$	$\dashv$			
			_	ļ		+	$\vdash$	$\dashv$	+-	<del> </del>	<del> </del>
				<u> </u>		╁		$\dashv$	+		<del></del>
	<del></del>				_	-		$\dashv$	+-		
	*	<u> </u>	<del></del>	<del> </del> -	·	┼	$\vdash$	$\dashv$	+		
				<del> </del>		$\vdash$		$\dashv$	+		
			-	<del> </del>		<del> </del>		$\dashv$			
	~			<del> </del>				$\dashv$	$\top$		<del></del>
DESCRIPTION OF SH	IIPMENT		\$ 'L	<u></u>	MODE OF SH	IPM	NT			:	
PIECE(S) CO	ONSISTING OF		BOX(ES)		COMMI	FRCI	AL C	ARR	IFR:	<del></del>	<del> </del>
ICE CHEST(	•		_ 55/(25)	)	COURIE	ER					
					SAMPL	ER C	ONV	EYE	0	(SHIPPING DOCUMENT N	JMBER)
PERSONNEL CUSTO			E / TIME	REG	ZE VED BY			_		REASON FOR CHANGE O	F CUSTODY
I A CV		1 /	HU6 14	40 7		` معر	a c	؎	e	- CASSIVI ON GIVANGE O	
SEALED	UNSEALE				EALED	0	<u> </u>	EΑ	LED [	<u> </u>	
RELINQUISHED BY		DAT	E TIME	E RE	CEIVED BY					REASON FOR CHANGE C	FCUSTODY
SEALED	UNSEALE			l hs	EALED		UN	SEA	rED [	<u> </u>	
RELINQUISHED BY		DAT	E TIME		CEIVED BY				!	REASON FOR CHANGE C	FCUSTODY
SEALED	UNSEAL	ED		s	EALED		UN	SE <i>P</i>	LED		

ACTIVITY LEADER (P	Print)	66-	NAME	OF SUR	VEY 0	PACTIVITY	Y	#	1		i	DATE OF COLLECTION SHEET
CONTENTS OF SHIP		9 1453	a	LAUS	160	200	1C.					DAY MONTH YEAR / OI /
<del></del>	ivicin'i	IY	PE OF CONTAIN	IERS			1 9	AMPL	.ED	MED	ΙA	RECEIVING LABORATORY
SAMPLE NUMBER	CUBITAINER	BOTTLE	BOTTLE TAINERS PER S	BOTT		VOA SET (2 VIALS EA)	water	Soil	sediment	ust	other	
EMA 78000 3001 - 15		L	TAINERS FER S	NOTICE INC	MBCR		_	$\vec{k}$	2	0	-	
-76		(						X				
-(7		l						X				
18		ı	,					X				
19		l	<u> </u>					X			_	
20		t						X				
11		J	 L					X				
22		l						X				
23		l						X				
24		l						X				
25		L						X				
										$\perp$		
										$ \bot $		
					$\bot$			$\perp$	_	_		
			<del></del>				Щ	_	$\dashv$	_		
								_	$\downarrow$	_	_	
								$\dashv$	4	4		
				ļ				$\downarrow$	4	4		
					_			$\dashv$	4	$\downarrow$		
								$\downarrow$	_	$\dashv$		
							-	+	4	$\dashv$		
							4	$\dashv$	$\downarrow$	+		
					_			+	+	+		
DECODIDATION OF CIT	IDMENT				MOI	DE OF SHIF	DAAE	ALT.	1			
DESCRIPTION OF SH		<del></del> .			IVIO							· · · · · · · · · · · · · · · · · · ·
;	NSISTING OF					COMMER COURIER		LUA	нні	EH∷	_	
ICE CHEST(S	S): OTHER			<u> </u>	_	SAMPLEI	R CC	)NVE	YED	)		(SHIPPING DOCUMENT NUMBER)
PERSONNEL CUSTOE												
RELINQUISHED BY (	SAMPLER)	DATI	, X,	l i	ECEIV	ED 8Y					ł	REASON FOR CHANGE OF CUSTODY
SEALED	UNSEALE	o had 9/2	2465	735	SEAL	ED.	ı	JNSE	ΕΑι	_ED	, Н	
RELINQUISHED BY	<del></del>	DATE	TIME	R	ECEIV	ED BY						REASON FOR CHANGE OF CUSTODY
					SEAL	FN	1	UNS	FΛ	ıer	, ,	
SEALED RELINQUISHED BY	UNSEALE	DATI	TIME			ED BY		<u>~</u>	-0		1	REASON FOR CHANGE OF CUSTODY
				L					<b></b> .			
SEALED	UNSEALE		l		SEAL	ED		UNS	ŁΑ	LE	<u> </u>	

7-EPA-9262(Revised 5/85)

ACTIVIT	Y LEADER P	EADER/Print) McGbsscu NAME OF SURVEY OR ACTIVITY #							1			DATE OF COLLECTION 6 SHEET	
	ITS OF SHIP		-1 p.s.se	<u> </u>	(VIC IC	<u>, u                                    </u>	21110						DAY MONTH YEAR ( U'
S.A.	AMPLE JMBER	CUBITAINER	BOTTLE	BOTTLE TAINERS PER	ВОТТ		VOA SET (2 VIALS EA)	water	AMP.	nent	MEDI	A Other	RECEIVING LABORATORY REMARKS/OTHER INFORMATION (condition of samples upon receipt, other sample numbers, etc.)
EMA	78 000 300 i - 26	NUME	(	TAINERS PEH	SAMPLE NO	)WREH		*	×	ŭ	-	_	
<u> </u>	1 27		(	<u></u>					x				
	28		ĺ						λ				
	29		1						X				
	30		1						×				
	31		1						X				
	32		(		<u>.</u>				χ				
	33				<u> </u>				X				
	34		-		ļ				X	_	$\perp$		
<u> </u>	35		l		ļ				X	_	_		
<u> </u>											$\dashv$		
<u> </u>					<del> </del>			H	$\vdash$	$\dashv$	$\dashv$		
	<del></del> -						-		$\vdash$	$\dashv$	$\dashv$		
<del> </del>						$\dashv$		-	$\vdash$	$\dashv$	$\dashv$		
					<del> </del>	$\dashv$			$\vdash$	-	+		
		-			<del> </del>					$\dashv$	$\dashv$		
					1	+				$\dashv$	$\forall$		
										_	$\top$		
					1								
					ļ					$\bot$	$\perp$		
					<u> </u>								
DESCRI	PTION OF SH	IIPMENT			<u> </u>	MO	DE OF SHII	PME	NT				
<b> </b>	_ PIECE(S) CC	NSISTING OF		_ BOX(ES)		-	— COMMEI — COURIE		L CA	ARR	IER:.		
	_ ICE CHEST(	S): OTHER	<del> </del>			,	SAMPLE		ONV	EYE(	D		(SHIPPING DOCUMENT NUMBER)
PERSON	INEL CUSTO	OY RECORD											
	UISHED BY												
RELING	ED JISHED BY	UNSEALE	DAT	E TIM	E R	RECEIVED BY REASON FOR CHANGE OF CUSTODY							REASON FOR CHANGE OF CUSTODY
SEAL	ED	UNSEALE		E TIMI		SEAL	ED ED BY		UNS	SEA.	LEC	7	REASON FOR CHANGE OF CUSTODY
RELING	JISHED BY		DAT	- IIIM	·   *	CCEIV	, EU <b>D</b> (						REASON FOR CHANGE OF COSTOR
SEALE	<del>-</del> D	UNSEAL	E OF		-	SEALED UNSEALED							

ACTIVIT	Y LEADER(P	rint),	<u> </u>	NAME	OF SUR	YEY OR ACTIVIT	ſΥ				DATE OF COLLECTION SHE	-	
E	Y LEADER(P	Mc Gl	2550 n	$\mathcal{U}_{i}$	nited	YEY OR ACTIVITY Zinc	<u>~</u>				DAY MONTH YEAR / Of		
	ITS OF SHIP											_	
SA	MPLE		8 2 Z BOTTLE	PE OF CONTAI	NERS	VOA SET	Ţ.;	SAMPLI		EDIA othe	RECEIVING LABORATORY REMARKS/OTHER INFORMATION		
Ň	JMBER	CUBITAINER	BOTTLE	BOTTLE (2 VI			S S	sediment	ansi dansi	(condition of samples upon receipt, other sample numbers, etc.)			
EMA	78000	NUME	BERS OF CON	TAINERS PER	SAMPLE NU	MBER	w with	\ \tilde{\lambda}	<del>* </del>	-			
300	/			<u> </u>	<del> </del> -		↓_		4				
	37		1				_	M	$\perp$	_			
<u> </u>	38		1		<u> </u>			X	$\perp$				
<b>]</b>	39		- 1					x					
	40		1				T	x					
	41		1	<del></del> -				x					
	42		1			<del></del>	1	x	+	1			
	43		i		1	<del></del>	$\top$	x	+	1			
<del>                                     </del>	44		<u> </u>		<del> </del>		+	x	十	+			
<del>  -</del>			1	<u> </u>	<del> </del>		+-	X	+	-			
1 <del>1</del>	45	· i		<del></del>	<del> </del>		+	1	+	<del> </del>		<del>.</del>	
<b></b>	46			<del></del>	<del> </del>	<del></del> -	+	4	+	-			
<u> </u>			<del></del>		<del> </del>		-	$\vdash +$	$\perp$	-			
					ļ		<u> </u>	$\perp$	_	_			
					ļ				$\perp$				
								$\perp$					
·									T				
							П		T				
					<del> </del>		$\Box$	$\top$	†	1			
<u> </u>					<del>                                     </del>	<del>-  </del>	+	$\dashv$	+	+			
ļ							╂╌┨	+	+	+			
					<u> </u>		+	+	+	+			
<u> </u>					<del> </del>		$\sqcup$		1	-			
<u> </u>		·			ļ	<del></del> -	$\vdash$		_		<u> </u>		
					Ĺ		Ш						
DESCRIP	TION OF SH	IPMENT	·			MODE OF SH	IPME	NT					
	PIECE(S) CO	NSISTING OF		_ BOX(ES)		СОММЕ	RCIA	L CAF	RRIE	R:			
"1	ICE CHEST(S	s): OTHER				COURIE		<del></del> .					
						SAMPLI	ER CC	INVEY	ΈD		(SHIPPING DOCUMENT NUMBER)		
	NEL CUSTOD		DAT	TIME	105	CEIVED BY				-	REASON FOR CHANGE OF CUSTOR		
RELINGU	DIGHED BY	Cortor	5-5	-06 /A	1	CEIVED BY					REASON FOR CHANGE OF CUSTOL	! ۲۰	
SEALE	tel o	UNSEALE		1	٠,١	SEALED	ι	JNSE	Au	ED [		1	
	ISHED BY		DATE	TIME	<del></del>	CEIVED BY					REASON FOR CHANGE OF CUSTOR	) )	
												i	
SEALE		UNSEALE	DATE	TIME		SEALED		UNSE	AL	ED [	REASON FOR CHANGE OF CUSTO	<del></del>	
RECINQU	ISHED BY		DATE	-	"								
SEALE	n	UNSEALE			<u> </u>	SEALED		UNSE	EAL	ED			

ACTIVITY LEADER(Print)  Eddie McGlassia United Ziac #										DATE OF COLLECTION 6 SHEET  BY 910(1 05 06 ) Of / Of /			
001751	4 4 (6 /	7CG/ass	in	14	luite	<u>d z</u>	-iac -						DAY MONTH YEAR
CONTEN	ITS OF SHIP	MENI	TVD	E OF CONTA	INEDS		-	1 6	AMB	I GD	MED	<u> </u>	
SA	MPLE	CHOITHNED	80E		VOA SET	-	AMP			other			
	JMBER	CUBITAINER	BOTTLE BERS OF CONT	BOTTLE AINERS PER		NUMBER	(2 VIALS EA)	water	Soil	sediment	dust	1	(condition of samples upon receipt other sample numbers, etc.)
EMA	78006		(		T				X	_			
700	1 48		(	<del></del>				$\vdash$	X	$\exists$			
	49				<del>                                     </del>		<del>                                     </del>	-		_			
	50		(		+				×	$\dashv$			
	51				+				×				
	52		(	<del></del>	<del> </del> -				×	$\dashv$		_	
	53			-	1		†		×			_	
<b></b>	54		(		+				Y	7	1		
	55	-	(		<u> </u>				x			_	
				***									
											_		
						•							
											1		
										$\perp$	$\perp$		
					<u> </u>				.		$\perp$		
					<u> </u>								
					) }								
DESCRIP	TION OF SH	IPMENT				М	ODE OF SHI	PME	NT				
	PIECE(S) CO	NSISTING OF		. BOX(ES)		_	COMME	RCIA	L CA	RRI	ER:		
	_ ICE CHEST(S	S): OTHER					COURIEF		NVE	YEC	)		(SHIPPING DOCUMENT NUMBER)
PERSON	NEL CUSTOD	Y RECORD				i	··						tom the boomen nomberly
	JISHED BY (		DATE		E	RECEI	VED BY	-					REASON FOR CHANGE OF CUSTODY
/4	the Clay	tex	5/12	106 11	18								
SEALE RELINQU	ISHED BY	UNSEALE	DATE	TIM	E		VED BY		JNS	EΑι	LED	Т	REASON FOR CHANGE OF CUSTODY
SEALE		UNSEALE	DATE	TIM			LED IVED BY	-	UNS	EΑ	LEC	Д	REASON FOR CHANGE OF CUSTODY
RELINGU	JISHED BY		I DATE			NEUE							
SEALE		UNSEALE	:		}	SEA	LED		UNS	EΑ	LEC	ъД	

ACTIV	ACTIVITY LEADER (Print)  ACTIVITY LEADER (Print)  ACTIVITY OF ACTIVITY  Colympia Control Contr								DATE OF COLLECTION SHEET  AND THE OF COLLECTION OF COLLECT						
			hatton		KAITE	ړ د :	o Ziac						DAY MONTH YEAR / UI		
CONTR	NTS OF SHIP	MENI	TYP	E OF CONT	AINERS	<del></del>		1 -	AMPI	FD	MED	IΔ	DECEMBED LABORATORY		
	SAMPLE IUMBER	CUBITAINER	80TLE	BOTTLE	BOT		VOA SET (2 VIALS EA)						RECEIVING LABORATORY  REMARKS/OTHER INFORMATION (condition of samples upon receipt.		
			BERS OF CONT					water	sori	sediment	dust		other sample numbers, etc.)		
300	A78Q00 0 ( - 56		(						X						
	57		Ĺ						×						
	58		(						k						
	59		( .						K						
	60		Ţ		1				×	$\exists$	$\exists$				
	6(		1		<del>                                     </del>				×	$\dashv$					
	62		1						X		$\dashv$				
	63		1	<del>-,</del> -	+-				x	7	1				
	64				+-				X	1	$\dashv$				
<b> </b>	65		1				<b> </b>		X		寸				
			-		+			H	X	$\dashv$	$\dashv$				
	66 67		-,	····	<del>- </del>			$\vdash$	쉾	$\dashv$	$\dashv$				
	68							$\vdash$	-+	$\dashv$	$\dashv$		<del> </del>		
								$\dashv$	쉬	$\dashv$	$\dashv$				
	69					<del></del>	<u> </u>		<u>х</u> х	$\dashv$	$\dashv$				
	70		<del>- ; -  </del>		<del>-</del>			$\dashv$	$\dashv$	$\dashv$	$\dashv$				
	7(								×	$\dashv$	$\dashv$				
_	72				-			$\vdash$	$\frac{2}{x}$	$\dashv$	$\dashv$				
	73							-	-	$\dashv$	$\dashv$				
ļ	74				+			$\dashv$	<u> </u>	$\dashv$	$\dashv$				
	75		\ 		<del></del>			_	싀	4	4	_			
				1	duia	<u>~</u>	W		$\dashv$	+	↲				
							las	<u>.</u> प	_	+	싷		= /		
				<del></del>	<del> </del>	]		$\Rightarrow$	$\Rightarrow$	4	1		dlow		
						اـــــــا									
DESCR	IPTION OF SH	IPMENT				M	ODE OF SHIF	PME	NT						
	PIECE(S) CO	NSISTING OF		_ BOX(ES)		_	СОММЕЯ		L CĄ	RRI	ER:				
	ICE CHEST(S	S): OTHER				-	ZSAMPLEI		\ <b>\</b> !\/E	VEN	,				
DEDCO	NNEL CHETOE	V DECORDA	,				SAWIFLE	n 00	HAAC	160			(SHIPPING DOCUMENT NUMBER)		
	NNEL CUSTOD		DATE	TIM		ECE	VED BY		-			-	REASON FOR CHANGE OF CUSTODY		
		lastal	5/12	106 17:	25								Del. to Lab.		
SEAL		UNSEALE				<del></del>	LED	į	JNS	EΑι	LED				
RELING	UISHED BY	ED BY DATE TIME RECEIVED BY REASON FOR CHANGE OF CUSTO								REASON FOR CHANGE OF CUSTODY					
	ED.	UNSEALE	۲,		<u> </u>	]SEA	LED		UNS	EΔ	LEC	, r			
SEAL	UISHED BY	UNSEALE	DATE	TIM	E F		VED BY					1	REASON FOR CHANGE OF CUSTODY		
			_[			_									
SEAL	ED	UNSEALE		1	T	SEAL	LED		UNS	EA	LE	∘┌			

Sample Number:	1 QC Co	de: Matr	ix: Solid	Tag ID: 3057-1						
		Project Manager: Eddie McGlasson								
ed Zinc No. 1 site san	npling	State	: Kansas							
			Site ID:	A78Q <b>Site OU:</b> 00						
EPA #7	Ce ( 3	:								
1	External Samı	ole Number: _								
(or Circle One:	Low Medium	(High)	Date	Time(24 hr)						
	Sample Coll	ection: Start:	61610	6 <u>((: (</u> 0						
<del></del>		End:	_/_/_	_:_						
es:			- · · · · · · · · · · · · · · · · · · ·							
	Holding Time	Analysis	I- b.: ICD	•						
		·	·							
Kans	sof DR &	Hw454								
	78Q00 ed Zinc No. 1 site san erfund ed Zinc No. 1 -  EDA = 7  (or Circle One:	Production of the sampling  and Zinc No. 1 site sampling  and Zinc No. 1 -  EDA = Z C (3  External Sample (or Circle One: Low Medium)  Sample Collection  Ses:  Preservative Holding Time 4 Deg C 180 Days	Project Manager and Zinc No. 1 site sampling  States and Zinc No. 1 -  EDA = Z Ce ( 3  External Sample Number:  (or Circle One: Low Medium High)  Sample Collection: Start: End:  Es:  Preservative Holding Time Analysis 4 Deg C 180 Days 1 Metals in Solice	Project Manager: Eddie McCed Zinc No. 1 site sampling  State: Kansas  Frund  Ed Zinc No. 1 - Site ID:  External Sample Number:  (or Circle One: Low Medium High)  Date  Sample Collection: Start: 6/6/0  End:  Preservative Holding Time Analysis						

Sample Collected By: EM/AR-

ASR Number:	3057 <b>Sample Numbe</b>	er: 2	Code: Ma	atrix: Solid	Tag ID: 3057-2
Project ID:	EMA78Q00		Project Manage	er: Eddie McC	Glasson
Project Desc:	United Zinc No. 1 site s	ampling	4		
City:	Iola		Stat	t <b>e:</b> Kansas	
Program:	Superfund			•	
Site Name:	United Zinc No. 1 -			Site ID:	A78Q <b>Site OU:</b> 00
Location Desc:	EPA	± 138a	Ce(13		
		External S	ample Number:		
<b>Expected Conc</b>	(or Circle On	e: Low Med	dium (High)	Date	Time(24 hr)
Latitude:		Sample	Collection: Star	t: 61610	6 1 <u>1:2</u> 9
Longitude:	<del></del>		End	d://_	:-
Laboratory An	alyses:				·
Container	Preservative	Holding Tir	ne Analysis		
1 - 8 oz glass	4 Deg C	180 Da	ays 1 Metals in So	olids by ICP	
Sample Comme	ents:				
(N/A)		1508	E. Monso e	_	

ASR Number:	3057 <b>Sample Nu</b> i	nber: 3 QC Co	ode: Mati	'ix: Solid Ta	<b>g 1D:</b> 3057-3							
Project ID:	<u>-</u>		oject Manager	: Eddie McGlass	son							
Project Desc: City:	United Zinc No. 1 si Iola	te sampling	State: Kansas									
Program: Site Name:	Superfund United Zinc No. 1 -		٠.	Site ID: A78	Q <b>Site OU:</b> 00							
Location Desc:		EAA # 21	Cella									
	·	External Sam	ple Number:									
Expected Conc	(or Circle	One: Low Mediur	n (High)	Date	Time(24 hr)							
Latitude:		Sample Co	llection: Start:	616106	<u>(1:50</u>							
Longitude:	, <del></del>		End:	_/_/_	<u>_</u> : '							
Laboratory An	Ŧ	·										
Container 1 - 8 oz glass	<b>Preservative</b> 4 Deg C	<b>Holding Time</b> 180 Days	Analysis 1 Metals in Solid	ls by ICP								
Sample Comme	ents:		-16									
(N/A)		206 5.9	- Fu									

EMA78Q00		Project Manage	r: Eddie Mc	Glassor	1
Jnited Zinc No. 1 s ola	ite sampling	Stat	e: Kansas		
Superfund Jnited Zinc No. 1 -		,	Site ID:	A78Q	Site OU: 00
	EPA*5	-4 Cell 1			
	Extern	al Sample Number:		<del>_</del>	
(or Circle	e One: Low	Medium (High)	Date		Time(24 hr)
	Sam	ple Collection: Start	الكالك ::	26	12:20
<u> </u>		End	://_	<u>.</u>	_:_
lyses: Preservative	Holdin	g Time Analysis			
4 Deg C	180	Days 1 Metals in So	lids by ICP		
nts:	. ( -	C (( a(		<del>-</del> · · ·	
	403	South St.			
	Jnited Zinc No. 1 sola Superfund Jnited Zinc No. 1 -  (or Circle    Just	Jnited Zinc No. 1 site sampling ola Superfund Jnited Zinc No. 1 -  Extern  (or Circle One: Low  Sam  Iyses: Preservative Holdin 4 Deg C 180	Inited Zinc No. 1 site sampling ola State Superfund United Zinc No. 1 -  External Sample Number:  (or Circle One: Low Medium High)  Sample Collection: Start  End  Iyses: Preservative Holding Time Analysis 4 Deg C 180 Days 1 Metals in So	State: Kansas Superfund United Zinc No. 1 - Site ID:    State: Kansas Superfund	State: Kansas Superfund United Zinc No. 1 - Site ID: A78Q

Sample Collected By: EM/AR-AH

ASR Number:	3057 <b>Sample Numb</b>	er: 5 QC Co	ode: Mati	rix: Solid Tag	<b>1D:</b> 3057-5
Project ID:	EMA78Q00 United Zinc No. 1 site		oject Manager	Eddie McGlass	on
•	Iola	Sampling	State	: Kansas	
Program:			51213		
_	United Zinc No. 1 -			Site ID: A780	Q Site OU: 00
Location Desc:	EP.	A#48 0	Cel(2	· <u>· · · · · · · · · · · · · · · · · · </u>	
		External Sam	nple Number:		
Expected Conc	(or Circle O	ne: Low Mediur	n High)	Date	Time(24 hr)
Latitude:		Sample Co	llection: Start:	616106	12:35
Longitude:			End:		: ·
Laboratory An	alyses:	-			
Container	Preservative	Holding Time	Analysis		•
1 - 8 oz glass	4 Deg C	180 Days	1 Metals in Solid	ds by ICP	·
Sample Commo	ents:			<del></del>	
(N/A)		508 5	outh sf		

Sample Collected By: EMAR

1 of 1

ASR Number:	3057	Sample Number:	6	QC Co	de:	Matrix	k: Solid	Tag I	<b>D:</b> 3057-6
Project Desc:		Q00 Zinc No. 1 site sam	nolina	Pro	ject Man	ager:	Eddie Mc(	Glasson	1
City:	Iola		·P····9		S	State:	Kansas		•
Site Name:	•						Site ID:	A78Q	Site OU: 00
Location Desc:			EP,	AFI	23 0	2<1	1		
		E	Externa	al Samp	le Numb	er:			· 
Expected Conc	:	(or Circle One:	Low	Medium	(High)		Date		Time(24 hr)
Latitude:	<u> </u>	<u> </u>	Samı	ple Coll	ection: S1	tart:	61610	6	12:00
Longitude:		<del></del>			I	End:	·/	-	_:
Laboratory An	-								
Container 1 - 8 oz glass		<b>reservative</b> Deg C	180		Analysis  1 Metals in		by ICP		
Sample Commo	ents:		- 2/	' <u>S</u> .,	-(		· · · · · · · · · · · · · · · · · · ·		
(N/A)			2 < 1	٦, ،	ZIM				

Sample Collected By: EM/AR

ACTIVITY LEADER (P	ACTIVITY LEADER (Print) NAME OF SURVEY OR ACT  Classe  Classe  Classe									0	DAY MONTH YEAR OF
CONTENTS OF SHIP		3 · L · S · · · ·		.17=12					-		DAT MORTH TEAM
SAMPLE NUMBER	CUBITAINER NUME	BOTTLE	BOTTLE AINERS PER SA	BOTTLE		water		sediment T		other	RECEIVING LABORATORY REMARKS/OTHER INFORMATION (condition of samples upon receipt, other sample numbers, etc.)
EN18900-1	(	·				-	V	-	Ĵ		
1 2	(						×				:
3	(						X				.,
. 4	l				ø		X				
5	1			1. 1			X				
V 6	(						X				
	-		<del>*************************************</del>			_	_		_		
			·····			-					
			, ,	7				-			
		<b></b>	12/ (i				-	-			
			47	<b>Y</b> _	1		_	-	-		
· · · · · · · · · · · · · · · · · · ·			•		Ar.		-				
						Z	_				
						2	_	-			
								K	0		
								-	_	<	W
											<u> </u>
		,									
ESCRIPTION OF S	HIPMENT				MODE OF SHI	PME	NT				
PIECE(S) C	ONSISTING O	F	_ BOX(ES)	:	COMME		AL C	ARF	RIER	: <b></b>	
ICE CHEST	(S): OTHER _				COURIE		ONV	/EYE	D		(SHIPPING DOCUMENT NUMBER)
SONNEL CUSTO	RSONNEL CUSTODY RECORD										
INQUISHED BY (SAMPLER) DATE TIME RECEIVED BY REASON, FOR CHANGE OF GUS TOO									REASON FOR CHANGE OF GUSTODY Del. to Las tackurisis		
ALED A	UNSEAL	ED DATI	E TIME		SEALED CEIVED BY		UN	SEA	LE	0[	REASON FOR CHANGE OF CUSTODY
140101110001											
LED	UNSEAL	ED	E TIME		SEALED ECEIVED BY		UN	SE/	ALE	D [	REASON FOR CHANGE OF CUSTODY
ZUISHED BY		Junit	-   ' ' ' ' ' ' '								
ED	UNSEAL	ED		<u> </u>	SEALED		ักเ	NSE	יום	~ ~~	ı

ĪGE

·U.S

### APPENDIX D

#### REMOVAL SITE EVALUATION FORM

(Six Pages)

# SUPERFUND REMOVAL SITE EVALUATION and REMOVAL PRELIMINARY ASSESSMENT

I. SITE NAME AND LOCATION:		
NAME: United Zinc #1 Site		
ADDRESS OR OTHER LOCATION IDENTIFIER: Easter	n portion of Iola, Kansas	
CITY: Iola	STATE: Kansas	ZIP: 66749
DIRECTIONS TO SITE: From Kansas City, go south on U.S. Go west on U.S. Highway 54 to the site.  MAP ATTACHED: See Figure 1 with Removal Site Evaluation		nately 90 miles to U.S. Highway 54.
II. PROGRAM CONTACTS:	- Кероп	<del></del>
REQUESTED BY: Eddie McGlasson	DATE OF F	REQUEST: 01/30/2006
AGENCY/OFFICE: U.S. EPA Region 7 Superfund Division		
MAILING ADDRESS: 901 N. 5th Street		
CITY: Kansas City	STATE: Kansas	ZIP: 66101
TELEPHONE: (913) 551-7756	FAX: (913) 551-7948	
EVALUATOR: Rick Claytor		
AGENCY/OFFICE: Tetra Tech EM Inc./Seagull Environment	tal Technologies, Inc.	
MAILING ADDRESS: 8030 Flint Street		
CITY: Lenexa	STATE: Kansas	<b>ZIP:</b> 66214
TELEPHONE: (913) 908-4649	FAX: (816) 734-9663	
III. REMOVAL SITE EVALUATION CRITERIA [40 C	CFR 300.410(E)]	
IS THERE A RELEASE AS DEFINED BY THE NCP:		YES 🛭 or NO 🗌
EXPLAIN: Residential soils containing lead at concentrations identified at the site, well above background levels.  (A RELEASE is defined as any spilling, leaking, pumping, pouring, emdumping, or disposing into the environment (including the abandonment any hazardous substances or pollutant or contaminant), but excludes: otherwise regulated; and the normal application of fertilizer. For purp	nitting, emptying, discharging nt of barrels, containers, and workplace exposures; engine	z, injecting, escaping, leaching, other closed receptacles containing exhaust emissions; nuclear releases o means threat of release.)
IS THE SOURCE A FACILITY OR VESSEL AS DEFINED	BY THE NCP:	YES 🖾 or NO 🗍
<b>EXPLAIN:</b> The site is considered a facility as defined by the N (A FACILITY is defined as any building, structure, installation, equipm well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, hazardous substance has been deposited, stored, disposed of or placed	nent, pipe or pipeline (includ , motor vehicle, rolling stock, l, or otherwise come to be loc	or aircraft or any site or area, where a cated; but does not include any
consumer product in consumer use or any vessel. A <b>VESSEL</b> is defined		· · ·

Revised 11-14-96

# SUPERFUND REMOVAL SITE EVALUATION and REMOVAL PRELIMINARY ASSESSMENT

REMOVAL PRELIMINARY ASSESSMENT	
DOES THE RELEASE INVOLVE A HAZARDOUS SUBSTANCE, OR POLLUTANT OR CONTAMINANT AS DEFINED BY THE NCP:	YES 🛛 or NO 🗌
<b>EXPLAIN:</b> Elevated concentrations of lead were identified in residential soils at the site.	
(A HAZARDOUS SUBSTANCE means any substance, element, compound, mixture, solution, hazardous waste, tair pollutant, or imminently hazardous chemical substance or mixture designated pursuant to the CWA, CERCLA, The term does not include petroleum products, natural gas, natural gas liquids, liquefied natural gas, synthetic gas and synthetic gas. The definition of POLLUTANT or CONTAMINANT includes, but is not limited to, any eleme or mixture, including disease-causing agents, which after release into the environment and upon exposure, ingestic assimilation into any organism, either directly from the environment or indirectly by ingestion through food chain be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunc deformations, in such organisms or their offspring. The term does not include petroleum products, natural gas, not liquefied natural gas, synthetic gas or mixtures of natural and synthetic gas).	SDWA, CAA or TSCA. IS or mixtures of natural int, substance, compound, ion, inhalation, or is, will or may reasonably tions or physical atural gas liquids,
IS THE RELEASE SUBJECT TO THE LIMITATIONS ON RESPONSE:	YES 🗌 or NO 🛛
EXPLAIN: There are no limitations on response.  (The LIMITATIONS ON RESPONSE provisions of the NCP (40 CFR 300.400(B) states that removals shall not	
response to a release: of a naturally occurring substance in its unaltered or natural form; from products that are of, and result in exposure within, residential buildings or business or community structures; or into public or priv supplies due to deterioration of the system through ordinary use.)	
DOES THE QUANTITY OR CONCENTRATION WARRANT RESPONSE:	YES 🛛 or NO 🗌
<b>EXPLAIN:</b> Approximately 30 properties have been identified where surface soils contain lead above action levels (RAL). For this site, a RAL for lead has been established at 400 mg/kg for schools, dayc residences where children with elevated blood-lead (EBL) levels reside. An RAL of 800 mg/kg will a residential and commercial properties.	are centers, and
HAS A PRP BEEN IDENTIFIED:	YES 🗌 or NO 🛛
<b>EXPLAIN:</b> Investigation of potentially responsible parties (PRP) is being conducted by EPA.	<u> </u>
IV. CONDITIONS TO WARRANT REMOVAL [40 CFR 300.415(B)(2)]:	
ACTUAL OR POTENTIAL EXPOSURE TO HAZARDOUS SUBSTANCES, POLLUTANTS, OR CONTAMINANTS:	
EXPLAIN: Residential soils containing lead at concentrations greater than 400 mg/kg were identified	<del></del>
ACTUAL OR POTENTIAL CONTAMINATION OF DRINKING WATER SUPPLIES:	YES 🗌 or NO 🛚
<b>EXPLAIN:</b> Drinking water for the site area is provided by a public water supply.	
HAZARDOUS SUBSTANCES, POLLUTANTS, OR CONTAMINANTS IN DRUMS, BARRELS,OR BULK STORAGE CONTAINERS:	YES 🗌 or NO 🛚
EXPLAIN: The site does not contain hazardous substances stored in bulk storage containers.	VEC M. NO C
HIGH LEVELS OF HAZARDOUS SUBSTANCES, POLLUTANTS, OR CONTAMINANTS IN NEAR-SURFACE SOILS:	YES 🖾 or NO 🗌
<b>EXPLAIN:</b> Elevated concentrations of lead were detected in surface soil samples collected from the s	ite.

2

# SUPERFUND REMOVAL SITE EVALUATION and REMOVAL PRELIMINARY ASSESSMENT

REMOVAL I RELIMINARI ASSESSMENT	
CONDITIONS SUSCEPTIBLE TO IMPACT FROM ADVERSE WEATHER CONDITIONS:	YES 🖾 or NO 🗌
<b>EXPLAIN:</b> The presence of elevated concentrations of lead in surface soils could lead to contaminat of lead contamination via windblown dust or leaching to groundwater.	ed runoff or migration
THREAT OF FIRE OR EXPLOSION:	YES 🗌 or NO 🛭
EXPLAIN: No threat of fire or explosion exists at the site.	
POTENTIAL FOR OTHER FEDERAL OR STATE RESPONSE MECHANISMS:	YES 🖾 or NO 🗌
<b>EXPLAIN:</b> The Kansas Department of Health and Environment (KDHE) has been involved with pot issues related to this site.	ential contamination
OTHER SITUATIONS OR FACTORS WHICH POSE A THREAT:	YES 🗌 or NO 🔯
EXPLAIN: No other situations or factors exist that could pose a threat.	
V. POTENTIAL REMOVAL ACTIONS [40 CFR 300.415(D)]:	
(NOTE: The following identifies potential removal actions which may be determined to be appropriate and study. The proposed actions should be considered preliminary proposals and are subject to change.)	pending further review
SITE SECURITY:	YES 🗌 or NO 🖾
<b>EXPLAIN:</b> The site is not fenced; however, because the site encompasses a large residential area, it is secure the entire area of contamination.	s not practical to
STABILIZATION OR REMOVAL OF SURFACE IMPOUNDMENTS:	YES 🗌 or NO 🛛
EXPLAIN: No surface impoundments exist at the site.	
CAPPING OF CONTAMINATED SOIL:	YES ⊠ or NO □
<b>EXPLAIN:</b> Because elevated concentrations of lead were identified in surface soil, capping could be areas.	warranted in certain
USE OF CHEMICALS TO CONTROL/RETARD SPREAD OF CONTAMINATION:	YES 🗌 or NO 🛛
<b>EXPLAIN:</b> No chemicals would likely be used to control or retard the spread of contamination from action.	site soils as a removal
CONTAMINATED SOIL EXCAVATION:	YES 🛛 or NO 🗌
<b>EXPLAIN:</b> Contaminated soils were identified at the site that will likely require excavation.	
REMOVAL OF DRUMS, TANKS, OR BULK STORAGE CONTAINERS:	YES 🗌 or NO 🗵
EXPLAIN: No bulk storage containers are present on site.	
CONTAINMENT, TREATMENT, OR DISPOSAL OF HAZARDOUS SUBSTANCES, POLLUTANTS,OR CONTAMINANTS:	YES ⊠ or NO □
EXPLAIN: Treatment and/or disposal of excavated soils would be required at this site.	
PROVIDE ALTERNATIVE WATER SUPPLIES:	YES 🗌 or NO 🛛
EXPLAIN: Contaminated drinking water was not identified at the site.	

# SUPERFUND REMOVAL SITE EVALUATION and REMOVAL PRELIMINARY ASSESSMENT

OMMENT: Excavation and off-site disposal of lead-contaminated soils from schools, daycare centers, and residential (and assibly commercial) properties would likely be the primary removal action conducted at this site.  ADDITIONAL REMOVAL SITE EVALUATION RECOMMENDED  ite one or more of the conditions or factors from Section IV. CONDITIONS TO WARRANT A REMOVAL ACTION, as a basis for commending that additional site evaluation be performed.)  EXPOSURE TO HAZARDOUS SUBSTANCES OR POLLUTANTS OR CONTAMINANTS  CONTAMINATED DRINKING WATER  FIRE/EXPLOSION THREAT  CONTAMINATED SOIL  DRUMS, BARRELS OR CONTAINERS  Rechanism  Interify one or more of the removal actions listed in Section V. REMOVAL ACTIONS WHICH MAY BE APPROPRIATE, as examples of the person of response actions which may be appropriate pending the results of further site evaluation.)		FINDINGS AND RECOMMENDA		<del></del>	ALENIA T	CED
NOT A FACILITY OR VESSEL  NOT A HAZARDOUS SUBSTANCE OR POLLUTANT OR CONTAMINANT  INSUFFICIENT QUANTITY OR CONCENTRATION  MILLING/CAPABLE PRP IDENTIFIED  OMMENT:  X REMOVAL RECOMMENDED [ EMERGENCY X TIME-CRITICAL NON-TIME-CRITICAL ]  Ite one or more of the conditions or factors from Section IV. CONDITIONS TO WARRANT A REMOVAL ACTION, as a basis for recommend at a removal action be conducted.)  X EXPOSURE TO HAZARDOUS SUBSTANCES OR POLLUTANTS OR CONTAMINATED DRINKING WATER FIRE/EXPLOSION THREAT X CONTAMINATED SOIL.  DRUMS, BARRELS OR CONTAINERS NO OTHER RESPONSE MECHANISM OTHER FACTORS  Rentify one or more of the removal actions listed in Section V. REMOVAL ACTIONS WHICH MAY BE APPROPRIATE, as examples of the part of the primary removal action conducted at this site.  ADDITIONAL REMOVAL SITE EVALUATION RECOMMENDED  (CONTAMINATED SITE SECURITY Excavation and off-site disposal of lead-contaminated soils from schools, daycare centers, and residential (and sssibly commercial) properties would likely be the primary removal action conducted at this site.  ADDITIONAL REMOVAL SITE EVALUATION RECOMMENDED  (Excavation and off-site disposal of lead-contaminated soils from schools, daycare centers, and residential (and sssibly commercial) properties would likely be the primary removal action conducted at this site.  ADDITIONAL REMOVAL SITE EVALUATION RECOMMENDED  (Internative Properties would likely be the primary removal action conducted at this site.)  DRUMS, BARRELS OR CONTAINERS NOTHER EXPONSE MECHANISM  ON OTHER RESPONSE OTHER ACTIONS WHICH MAY BE APPROPRIATE, as examples of the set of response actions which may be appropriate pending the results of further site evaluation.)  SITE SECURITY CONTAMINANTS  CONTAMINANTS  CONTAMINATED DRINKING WATER PREPARED OTHER RESPONSE OF CHEMICAL CONTROLS  MECHANISM OTHER RESPONSE	ite on					
NOT A HAZARDOUS SUBSTANCE OR POLLUTANT OR CONTAMINANT  INSUFFICIENT QUANTITY OR CONCENTRATION  OMMENT:  X REMOVAL RECOMMENDED   EMERGENCY X TIME-CRITICAL NON-TIME-CRITICAL    Ite one or more of the conditions or factors from Section IV. CONDITIONS TO WARRANT A REMOVAL ACTION, as a basis for recommend at a removal action be conducted.)  X EXPOSURE TO HAZARDOUS SUBSTANCES OR POLLUTANTS OR CONTAMINANTS  CONTAMINATED DRINKING WATER   FIRE/EXPLOSION THREAT   X CONTAMINATED SOIL.  DRUMS, BARRELS OR CONTAINERS   NO OTHER RESPONSE   OTHER FACTORS    Bentify one or more of the removal actions listed in Section V. REMOVAL ACTIONS WHICH MAY BE APPROPRIATE, as examples of the pas of response actions which are recommended.)  SITE SECURITY   DRAINAGE CONTROL   IMPOUNDMENT STABILIZATIO    REMOVAL OF DRUMS, BARRELS,   X SOIL CAPPING   X SOIL EXCAVATION    ALT. DRINKING WATER SUPPLIFY   DRAINAGE CONTROL   ALT. DRINKING WATER SUPPLIFY    REMOVAL OF DRUMS, BARRELS,   X SOIL CAPPING   X SOIL EXCAVATION    ALT. DRINKING WATER SUPPLIFY   DRAINAGE CONTROL   ALT. DRINKING WATER SUPPLIFY    CONTAIN/TREAT/DISPOSE OF   CHEMICAL CONTROLS   ALT. DRINKING WATER SUPPLIFY    DOMMENT: Excavation and off-site disposal of lead-contaminated soils from schools, daycare centers, and residential (and ssibly commercial) properties would likely be the primary removal action conducted at this site.  ADDITIONAL REMOVAL SITE EVALUATION RECOMMENDED   EXPOSURE TO HAZARDOUS SUBSTANCES OR POLLUTANTS OR   ADVERSE WEATHER IMPACTS    CONTAMINATED DRINKING WATER   FIRE/EXPLOSION THREAT   CONTAMINATED SOIL    DRUMS, BARRELS OR CONTAINERS   NO OTHER RESPONSE   OTHER FACTORS    MCCHANISM   MCHANISM   OTHER PACTORS    DRUMS, BARRELS OR CONTAINERS   PREADONS MCCHANISM   OTHER PACTORS    EXPOSURE TO HAZARDOUS SUBSTANCES OR POLLUTANTS OR   ADVERSE WEATHER IMPACTS    CONTAMINATED DRINKING WATER   FIRE/EXPLOSION THREAT   CONTAMINATED SOIL    DRUMS, BARRELS OR CONTAINERS   NO OTHER RESPONSE   OTHER FACTORS    MCCHANISM   MCCHANISM   MCCHANISM   MCCHANISM   MCCHANISM   MCC	$\neg$	·	EMIC	VAL SITE EVALUATION CRITER	IA, as tr	
INSUFFICIENT QUANTITY OR CONCENTRATION  INSUFFICIENT QUANTITY OR CONCENTRATION  INSUFFICIENT QUANTITY OR CONCENTRATION  OMMENT:  X REMOVAL RECOMMENDED [ EMERGENCY X TIME-CRITICAL NON-TIME-CRITICAL]  Itie one or more of the conditions or factors from Section IV. CONDITIONS TO WARRANT A REMOVAL ACTION, as a basis for recomment at a removal action be conducted.)  X EXPOSURE TO HAZARDOUS SUBSTANCES OR POLLUTANTS OR CONTAMINANTS  CONTAMINANTS  INSUFFICIENT QUANTITY OR CONTAMINED ON THE RESPONSE NECHANISM  DRUMS, BARRELS OR CONTAINERS NO OTHER RESPONSE NECHANISM  Institute of the removal actions listed in Section V. REMOVAL ACTIONS WHICH MAY BE APPROPRIATE, as examples of the pass of response actions which are recommended.)  SITE SECURITY  DRAINAGE CONTROL IMPOUNDMENT STABILIZATION  REMOVAL OF DRUMS, BARRELS, X SOIL CAPPING X SOIL EXCAVATION  X CONTAINTREAT/DISPOSE OF CHEMICAL CONTROLS  ALT. DRINKING WATER SUPPLICATION OF THE CONTROL OF THE CO	-	NOT A RELEASE			+	
OMMENT:    IDENTIFIED	L	NOT A HAZARDOUS SUBSTANCE OR I	POLL	UTANT OR CONTAMINANT		LIMITATIONS
REMOVAL RECOMMENDED   EMERGENCY X TIME-CRITICAL NON-TIME-CRITICAL   ite one or more of the conditions or factors from Section IV. CONDITIONS TO WARRANT A REMOVAL ACTION, as a basis for recommending that additional site evaluation be conducted.)  X EXPOSURE TO HAZARDOUS SUBSTANCES OR POLLUTANTS OR CONTAMINATED DRINKING WATER   FIRE/EXPLOSION THREAT		INSUFFICIENT QUANTITY OR CONCE	NTR	ATION		
ite one or more of the conditions or factors from Section IV. CONDITIONS TO WARRANT A REMOVAL ACTION, as a basis for recommend at a removal action be conducted.)    X	MMC	MENT:				
ite one or more of the conditions or factors from Section IV. CONDITIONS TO WARRANT A REMOVAL ACTION, as a basis for recommat a removal action be conducted.)  X EXPOSURE TO HAZARDOUS SUBSTANCES OR POLLUTANTS OR CONTAMINATED DRINKING WATER FIRE/EXPLOSION THREAT X CONTAMINATED SOIL.  DRUMS, BARRELS OR CONTAINERS NO OTHER RESPONSE OTHER FACTORS  Lentify one or more of the removal actions listed in Section V. REMOVAL ACTIONS WHICH MAY BE APPROPRIATE, as examples of the per of response actions which are recommended.)  SITE SECURITY DRAINAGE CONTROL IMPOUNDMENT STABILIZATION REMOVAL OF DRUMS, BARRELS.  X SOIL CAPPING X SOIL EXCAVATION ALT. DRINKING WATER SUPPLICATION ALT. DRINKING WATER SUBSTANCES OR POLLUTANTS OR CONTAMINANTS  ADDITIONAL REMOVAL SITE EVALUATION RECOMMENDED  Lite one or more of the conditions or factors from Section IV. CONDITIONS TO WARRANT A REMOVAL ACTION, as a basis for commending that additional site evaluation be performed.)  EXPOSURE TO HAZARDOUS SUBSTANCES OR POLLUTANTS OR CONTAMINANTS  CONTAMINANTS  CONTAMINATED DRINKING WATER FIRE/EXPLOSION THREAT CONTAMINATED SOIL  DRUMS, BARRELS OR CONTAINERS MECHANISM OTHER FACTORS  Hentify one or more of the removal actions listed in Section V. REMOVAL ACTIONS WHICH MAY BE APPROPRIATE, as examples of the pers of response actions which may be appropriate pending the results of further site evaluation.)  SITE SECURITY DRAINAGE CONTROL IMPOUNDMENT STABILIZATION ACTIONS WHICH MAY BE APPROPRIATE, as examples of the pers of response actions which may be appropriate pending the results of further site evaluation.)  SITE SECURITY DRAINAGE CONTROL IMPOUNDMENT STABILIZATION ACTIONS WHICH MAY BE APPROPRIATE, as examples of the pers of respo						
at a removal action be conducted.)    X	R	REMOVAL RECOMMENDED   EME	RGE	NCY X TIME-CRITICAL		NON-TIME-CRITICAL J
CONTAMINATED DRINKING WATER   FIRE/EXPLOSION THREAT   X CONTAMINATED SOIL   DRUMS, BARRELS OR CONTAINERS   NO OTHER RESPONSE   MECHANISM   OTHER FACTORS   DRUMS, BARRELS OR CONTAINERS   NO OTHER RESPONSE   MECHANISM   OTHER FACTORS   DRIFT SECURITY   DRAINAGE CONTROL   IMPOUNDMENT STABILIZATIO   REMOVAL OF DRUMS, BARRELS,   X SOIL CAPPING   X SOIL EXCAVATION   X WASTES   CHEMICAL CONTROLS   ALT. DRINKING WATER SUPPLICATION   DMMENT: Excavation and off-site disposal of lead-contaminated soils from schools, daycare centers, and residential (and ssibly commercial) properties would likely be the primary removal action conducted at this site.    ADDITIONAL REMOVAL SITE EVALUATION RECOMMENDED   Ite one or more of the conditions or factors from Section IV. CONDITIONS TO WARRANT A REMOVAL ACTION, as a basis for commending that additional site evaluation be performed.)    EXPOSURE TO HAZARDOUS SUBSTANCES OR POLLUTANTS OR   CONTAMINANTS   CONTAMINANTS   CONTAMINATED DRINKING WATER   FIRE/EXPLOSION THREAT   CONTAMINATED SOIL   DRUMS, BARRELS OR CONTAINERS   NO OTHER RESPONSE   OTHER FACTORS   DRUMS, BARRELS OR CONTAINERS   NO OTHER RESPONSE   OTHER FACTORS   Entify one or more of the removal actions listed in Section V. REMOVAL ACTIONS WHICH MAY BE APPROPRIATE, as examples of the est of response actions which may be appropriate pending the results of further site evaluation.)    SITE SECURITY   DRAINAGE CONTROL   IMPOUNDMENT STABILIZATION			ion I	V. CONDITIONS TO WARRANT A	REMO	VAL ACTION, as a basis for recommen
DRUMS, BARRELS OR CONTAINERS  NO OTHER RESPONSE MECHANISM  OTHER FACTORS  Rectifity one or more of the removal actions listed in Section V. REMOVAL ACTIONS WHICH MAY BE APPROPRIATE, as examples of the set of response actions which are recommended.)  SITE SECURITY  DRAINAGE CONTROL  REMOVAL OF DRUMS, BARRELS, ETC.  X SOIL CAPPING  X SOIL EXCAVATION  ALT. DRINKING WATER SUPPLI  CHEMICAL CONTROLS  ALT. DRINKING WATER SUPPLI  ALT. DRINKING WATER SUPPLI  CHEMICAL CONTROLS  ALT. DRINKING WATER SUPPLI  CONDITIONAL REMOVAL SITE EVALUATION RECOMMENDED  The cone or more of the conditions or factors from Section IV. CONDITIONS TO WARRANT A REMOVAL ACTION, as a basis for commending that additional site evaluation be performed.)  EXPOSURE TO HAZARDOUS SUBSTANCES OR POLLUTANTS OR CONTAMINANTS  CONTAMINATED DRINKING WATER  EXPOSURE TO HAZARDOUS SUBSTANCES OR POLLUTANTS OR CONTAMINATED SOIL  DRUMS, BARRELS OR CONTAINERS  NO OTHER RESPONSE OTHER FACTORS  CONTAMINATED DRINKING WATER  FIRE/EXPLOSION THREAT  CONTAMINATED SOIL  DRUMS, BARRELS OR CONTAINERS  NO OTHER RESPONSE OTHER FACTORS  CONTAMINATED SOIL  DRUMS, BARRELS OR CONTAINERS  NO OTHER RESPONSE  OTHER FACTORS  CHEMICAL CONTROLS  ALTERNATIVE DRINKING WATER  CHEMICAL CONTROLS  ALTERNATIVE DRINKING WATER  CONTAIN/TREAT/DISPOSE OF  CHEMICAL CONTROLS  ALTERNATIVE DRINKING WATER  ALTERNATIVE DRINKING WATER  CONTAIN/TREAT/DISPOSE OF  CHEMICAL CONTROLS  ALTERNATIVE DRINKING WATER  CHEMICAL CONTROLS			CES	OR POLLUTANTS OR	X	ADVERSE WEATHER IMPACTS
DRUMS, BARRELS OR CONTAINERS MECHANISM OTHER FACTORS  MECHANISM VALUE OF DRUMS AS EXAMPLES OR POLITIONS WHICH MAY BE APPROPRIATE, as examples of the response actions which are recommended.)  SITE SECURITY DRAINAGE CONTROL IMPOUNDMENT STABILIZATION X SOIL EXCAVATION  X CONTAIN/TREAT/DISPOSE OF CHEMICAL CONTROLS ALT. DRINKING WATER SUPPLICATION OF WASTES  DMMENT: Excavation and off-site disposal of lead-contaminated soils from schools, daycare centers, and residential (and ssibly commercial) properties would likely be the primary removal action conducted at this site.  ADDITIONAL REMOVAL SITE EVALUATION RECOMMENDED  The cone or more of the conditions or factors from Section IV. CONDITIONS TO WARRANT A REMOVAL ACTION, as a basis for commending that additional site evaluation be performed.)  EXPOSURE TO HAZARDOUS SUBSTANCES OR POLLUTANTS OR CONTAMINANTS  CONTAMINANTS  CONTAMINATED DRINKING WATER FIRE/EXPLOSION THREAT CONTAMINATED SOIL  DRUMS, BARRELS OR CONTAINERS MECHANISM OTHER RESPONSE ACTIONS WHICH MAY BE APPROPRIATE, as examples of the response actions which may be appropriate pending the results of further site evaluation.)  SITE SECURITY DRINKING WATER FIRE/EXPLOSION THREAT IMPOUNDMENT STABILIZATION REMOVAL OF DRUMS, BARRELS, SOIL CAPPING SOIL EXCAVATION  CONTAIN/TREAT/DISPOSE OF CHEMICAL CONTROLS  ALTERNATIVE DRINKING WATER  ALTERNATIVE DRINKING WATER  CONTAIN/TREAT/DISPOSE OF CHEMICAL CONTROLS  ALTERNATIVE DRINKING WATER  ALTERNATIVE DRINKING WATER  CONTAIN/TREAT/DISPOSE OF CHEMICAL CONTROLS		CONTAMINATED DRINKING WATER		FIRE/EXPLOSION THREAT	X	CONTAMINATED SOIL
SITE SECURITY		DRUMS, BARRELS OR CONTAINERS				OTHER FACTORS
SITE SECURITY			ction	V. REMOVAL ACTIONS WHICH	MAY BE	APPROPRIATE, as examples of the
REMOVAL OF DRUMS, BARRELS, ETC.  X CONTAIN/TREAT/DISPOSE OF WASTES  CHEMICAL CONTROLS  ALT. DRINKING WATER SUPPLICATION OF WASTES  CHEMICAL CONTROLS  ALT. DRINKING WATER SUPPLICATION OF WASTES  ALT. DRINKING WATER SUPPLICATION OF WASTES OF	es of			· · · · · · · · · · · · · · · · · · ·		
ETC.  X CONTAIN/TREAT/DISPOSE OF WASTES  CHEMICAL CONTROLS  CHEMICAL CONTROLS  ALT. DRINKING WATER SUPPLICATION  ALT. DRINKING WATER SUPPLICAT	$\perp$			DRAINAGE CONTROL	—	IMPOUNDMENT STABILIZATION
MASTES  OMMENT: Excavation and off-site disposal of lead-contaminated soils from schools, daycare centers, and residential (and sibly commercial) properties would likely be the primary removal action conducted at this site.  ADDITIONAL REMOVAL SITE EVALUATION RECOMMENDED  The one or more of the conditions or factors from Section IV. CONDITIONS TO WARRANT A REMOVAL ACTION, as a basis for commending that additional site evaluation be performed.)  EXPOSURE TO HAZARDOUS SUBSTANCES OR POLLUTANTS OR CONTAMINANTS  CONTAMINATED DRINKING WATER  FIRE/EXPLOSION THREAT  CONTAMINATED SOIL  DRUMS, BARRELS OR CONTAINERS  MECHANISM  OTHER RESPONSE MECHANISM  OTHER FACTORS  INTERIOR OF THE PROPORTIATE, as examples of the results of further site evaluation.)  SITE SECURITY  DRAINAGE CONTROL  IMPOUNDMENT STABILIZATION  REMOVAL OF DRUMS, BARRELS, ETC.  CONTAIN/TREAT/DISPOSE OF  CHEMICAL CONTROLS  ALTERNATIVE DRINKING WATER  ALT. DRINKING WATER SITE ACTIONS AND CONTROLS  ALTERNATIVE DRINKING WATER  ALT. DRINKING WATER SITE ACTIONS AND CONTROLS  ALTERNATIVE DRINKING WATER  ALT. DRINKING WATER SITE ACTIONS AND CONTROLS  ALTERNATIVE DRINKING WATER  ALT. DRINKING WATER SITE ACTIONS AND CONTROLS  ALTERNATIVE DRINKING WATER  ALT. DRINKING WATER SITE ACTIONS AND CONTROLS  ALTERNATIVE DRINKING WATER  ALT. DRINKING WATER SITE ACTIONS AND CONTROLS  ALTERNATIVE DRINKING WATER  ALT. DRINKING WATER SITE ACTIONS AND CONTROLS  ALTERNATIVE DRINKING WATER  ALTERNATIVE ACTION OF THE ACTION OF THE ACT		ETC.	X	SOIL CAPPING	X	SOIL EXCAVATION
ADDITIONAL REMOVAL SITE EVALUATION RECOMMENDED  te one or more of the conditions or factors from Section IV. CONDITIONS TO WARRANT A REMOVAL ACTION, as a basis for commending that additional site evaluation be performed.)  EXPOSURE TO HAZARDOUS SUBSTANCES OR POLLUTANTS OR CONTAMINANTS  CONTAMINATED DRINKING WATER  FIRE/EXPLOSION THREAT  DRUMS, BARRELS OR CONTAINERS  Entify one or more of the removal actions listed in Section V. REMOVAL ACTIONS WHICH MAY BE APPROPRIATE, as examples of the es of response actions which may be appropriate pending the results of further site evaluation.)  SITE SECURITY  DRAINAGE CONTROL  SOIL EXCAVATION  CONTAIN/TREAT/DISPOSE OF  CHEMICAL CONTROLS  ALTERNATIVE DRINKING WATER  ALTERNATIVE DRINKING WATER  CONTAIN/TREAT/DISPOSE OF	, ,			CHEMICAL CONTROLS		ALT. DRINKING WATER SUPPLIE
ADDITIONAL REMOVAL SITE EVALUATION RECOMMENDED  te one or more of the conditions or factors from Section IV. CONDITIONS TO WARRANT A REMOVAL ACTION, as a basis for commending that additional site evaluation be performed.)  EXPOSURE TO HAZARDOUS SUBSTANCES OR POLLUTANTS OR CONTAMINANTS  CONTAMINATED DRINKING WATER  FIRE/EXPLOSION THREAT  CONTAMINATED SOIL  DRUMS, BARRELS OR CONTAINERS  PRECHANISM  OTHER FACTORS  Entify one or more of the removal actions listed in Section V. REMOVAL ACTIONS WHICH MAY BE APPROPRIATE, as examples of the es of response actions which may be appropriate pending the results of further site evaluation.)  SITE SECURITY  DRAINAGE CONTROL  SOIL EXCAVATION  CONTAIN/TREAT/DISPOSE OF  CHEMICAL CONTROLS  ALTERNATIVE DRINKING WATER  ALTERNATIVE DRINKING WATER  CHEMICAL CONTROLS  ALTERNATIVE DRINKING WATER  CONTROLS  CHEMICAL CONTROLS						
te one or more of the conditions or factors from Section IV. CONDITIONS TO WARRANT A REMOVAL ACTION, as a basis for commending that additional site evaluation be performed.)    EXPOSURE TO HAZARDOUS SUBSTANCES OR POLLUTANTS OR CONTAMINANTS   ADVERSE WEATHER IMPACTS	ssibl	y commercial) properties would likely be t	he pr	imary removal action conducted a	at this s	ite.
te one or more of the conditions or factors from Section IV. CONDITIONS TO WARRANT A REMOVAL ACTION, as a basis for commending that additional site evaluation be performed.)    EXPOSURE TO HAZARDOUS SUBSTANCES OR POLLUTANTS OR CONTAMINANTS   ADVERSE WEATHER IMPACTS						
te one or more of the conditions or factors from Section IV. CONDITIONS TO WARRANT A REMOVAL ACTION, as a basis for commending that additional site evaluation be performed.)  EXPOSURE TO HAZARDOUS SUBSTANCES OR POLLUTANTS OR CONTAMINANTS  CONTAMINATED DRINKING WATER  DRUMS, BARRELS OR CONTAINERS  Entify one or more of the removal actions listed in Section V. REMOVAL ACTIONS WHICH MAY BE APPROPRIATE, as examples of the es of response actions which may be appropriate pending the results of further site evaluation.)  SITE SECURITY  DRAINAGE CONTROL  REMOVAL OF DRUMS, BARRELS, ETC.  CONTAIN/TREAT/DISPOSE OF  CHEMICAL CONTROLS  ALTERNATIVE DRINKING WATER  ALTERNATIVE DRINKING WATER  CONTROLS  ALTERNATIVE DRINKING WATER  CHEMICAL CONTROLS						
EXPOSURE TO HAZARDOUS SUBSTANCES OR POLLUTANTS OR CONTAMINANTS  CONTAMINATED DRINKING WATER  DRUMS, BARRELS OR CONTAINERS  Entify one or more of the removal actions listed in Section V. REMOVAL ACTIONS WHICH MAY BE APPROPRIATE, as examples of the es of response actions which may be appropriate pending the results of further site evaluation.)  SITE SECURITY  DRAINAGE CONTROL  REMOVAL OF DRUMS, BARRELS, ETC.  CONTAIN/TREAT/DISPOSE OF  CHEMICAL CONTROLS  ADVERSE WEATHER IMPACTS  ADVERSE WEATHER IMPACTS  CONTAMINATED SOIL  ADVERSE WEATHER IMPACTS  CONTAMINATED SOIL  SOIL CONTAMINATED SOIL  ADVERSE WEATHER IMPACTS  CONTAMINATED SOIL  SOIL CONTAMINATED SOIL  SOIL CONTAMINATED SOIL  ADVERSE WEATHER IMPACTS  CONTAMINATED SOIL  SOIL CONTAMINATED SOIL  SOIL CAPPING  CHEMICAL CONTROLS  ALTERNATIVE DRINKING WATER  ADVERSE WEATHER IMPACTS  ADVERSE WEATHER IMPACTS  ADVERSE WEATHER IMPACTS  ADVERSE WEATHER IMPACTS  CONTAMINATED SOIL  SOIL CONTAMINATED SOIL  SOIL CAPPING  CHEMICAL CONTROLS  ALTERNATIVE DRINKING WATER  ADVERSE WEATHER IMPACTS  ADVERSE WEATHER IMPACTS  ADVERSE WEATHER IMPACTS  ADVERSE WEATHER IMPACTS  CONTAMINATED SOIL  SOIL CAPPING  CHEMICAL CONTROLS  ALTERNATIVE DRINKING WATER  TO THE ADVERSE WEATHER IMPACTS  CONTAMINATED SOIL  SOIL CAPPING  CHEMICAL CONTROLS  ALTERNATIVE DRINKING WATER  TO THE ADVERSE WEATHER IMPACTS  ADVERSE WEATHER IMPACTS  ADVERSE WEATHER IMPACTS  CONTAMINATED SOIL  ADVERSE WEATHER IMPACTS  CONTAMINATED SOIL  ADVERSE WEATHER IMPACTS  ADVERSE WEATHER IMPACTS  CONTAMINATED SOIL  ADVERSE WEATHER IMPACTS  ADVERSE WEATHER IMPACTS  CONTAMINATED SOIL  A						
CONTAMINATES  CONTAMINATED DRINKING WATER  FIRE/EXPLOSION THREAT  DRUMS, BARRELS OR CONTAINERS  Contaminated Soil  NO OTHER RESPONSE MECHANISM  Contaminated Soil  NO OTHER RESPONSE MECHANISM  Contaminated Soil  OTHER FACTORS  Contaminated Soil  NO OTHER RESPONSE MECHANISM  OTHER FACTORS  Contaminated Soil  NO OTHER RESPONSE MECHANISM  OTHER FACTORS  Contaminated Soil  Contaminated Soil  OTHER FACTORS  Contaminated Soil  OTHER FACTORS  Contaminated Soil  C	- 1		ion IN	/. CONDITIONS TO WARRANT A	REMOV	VAL ACTION, as a basis for
DRUMS, BARRELS OR CONTAINERS  NO OTHER RESPONSE MECHANISM  OTHER FACTORS  entify one or more of the removal actions listed in Section V. REMOVAL ACTIONS WHICH MAY BE APPROPRIATE, as examples of the es of response actions which may be appropriate pending the results of further site evaluation.)  SITE SECURITY  DRAINAGE CONTROL  REMOVAL OF DRUMS, BARRELS, ETC.  SOIL CAPPING  CONTAIN/TREAT/DISPOSE OF  CHEMICAL CONTROLS  ALTERNATIVE DRINKING WATHER	te one					
Entify one or more of the removal actions listed in Section V. REMOVAL ACTIONS WHICH MAY BE APPROPRIATE, as examples of the es of response actions which may be appropriate pending the results of further site evaluation.)  SITE SECURITY  DRAINAGE CONTROL  REMOVAL OF DRUMS, BARRELS, ETC.  CONTAIN/TREAT/DISPOSE OF  CHEMICAL CONTROLS  OTHER FACTORS  MECHANISM  OTHER FACTORS	e one	ending that additional site evaluation be perfor EXPOSURE TO HAZARDOUS SUBSTAN	med.)			ADVERSE WEATHER IMPACTS
SITE SECURITY   DRAINAGE CONTROL   IMPOUNDMENT STABILIZATION	e one	ending that additional site evaluation be perfor EXPOSURE TO HAZARDOUS SUBSTAN CONTAMINANTS	med.)	OR POLLUTANTS OR		
SITE SECURITY  REMOVAL OF DRUMS, BARRELS, ETC.  SOIL CAPPING  SOIL EXCAVATION  CONTAIN/TREAT/DISPOSE OF  CHEMICAL CONTROLS  ALTERNATIVE DRINKING WATER	e one	ending that additional site evaluation be perfor  EXPOSURE TO HAZARDOUS SUBSTAN  CONTAMINANTS  CONTAMINATED DRINKING WATER	med.)	OR POLLUTANTS OR  FIRE/EXPLOSION THREAT  NO OTHER RESPONSE		CONTAMINATED SOIL
REMOVAL OF DRUMS, BARRELS, SOIL CAPPING SOIL EXCAVATION  CONTAIN/TREAT/DISPOSE OF CHEMICAL CONTROLS ALTERNATIVE DRINKING WATER	e one	ending that additional site evaluation be perfor  EXPOSURE TO HAZARDOUS SUBSTAN CONTAMINANTS  CONTAMINATED DRINKING WATER  DRUMS, BARRELS OR CONTAINERS  y one or more of the removal actions listed in Se	med.)	OR POLLUTANTS OR  FIRE/EXPLOSION THREAT  NO OTHER RESPONSE  MECHANISM  V. REMOVAL ACTIONS WHICH N		CONTAMINATED SOIL OTHER FACTORS
ETC. SOIL CAPTING SOIL EXCAVATION  CONTAIN/TREAT/DISPOSE OF CHEMICAL CONTROLS ALTERNATIVE DRINKING WATER	e one	ending that additional site evaluation be perfor  EXPOSURE TO HAZARDOUS SUBSTAN CONTAMINANTS  CONTAMINATED DRINKING WATER  DRUMS, BARRELS OR CONTAINERS  y one or more of the removal actions listed in Seresponse actions which may be appropriate per	med.)	OR POLLUTANTS OR  FIRE/EXPLOSION THREAT  NO OTHER RESPONSE  MECHANISM  V. REMOVAL ACTIONS WHICH N  the results of further site evaluation.)		CONTAMINATED SOIL OTHER FACTORS APPROPRIATE, as examples of the
	te one	ending that additional site evaluation be perfor  EXPOSURE TO HAZARDOUS SUBSTAN CONTAMINANTS  CONTAMINATED DRINKING WATER  DRUMS, BARRELS OR CONTAINERS  y one or more of the removal actions listed in Seresponse actions which may be appropriate per  SITE SECURITY	med.)	OR POLLUTANTS OR  FIRE/EXPLOSION THREAT  NO OTHER RESPONSE  MECHANISM  V. REMOVAL ACTIONS WHICH N  the results of further site evaluation.)		CONTAMINATED SOIL OTHER FACTORS
	te one	ending that additional site evaluation be perfor  EXPOSURE TO HAZARDOUS SUBSTAN CONTAMINANTS  CONTAMINATED DRINKING WATER  DRUMS, BARRELS OR CONTAINERS  y one or more of the removal actions listed in Seresponse actions which may be appropriate per  SITE SECURITY  REMOVAL OF DRUMS, BARRELS,	med.)	OR POLLUTANTS OR  FIRE/EXPLOSION THREAT  NO OTHER RESPONSE  MECHANISM  V. REMOVAL ACTIONS WHICH NO THE RESULTS OF THE SITE OF EVALUATION.)  DRAINAGE CONTROL		CONTAMINATED SOIL OTHER FACTORS APPROPRIATE, as examples of the IMPOUNDMENT STABILIZATION

# SUPERFUND REMOVAL SITE EVALUATION and REMOVAL PRELIMINARY ASSESSMENT

VII. ADDITIONAL INFORMATION OR COMMENTS:

# **EPA USE ONLY**

VIII. CERTIFICATION

SIGNATURE:

DATE:

POSITION/TITLE: OFFICE/AGENCY:

# SUPERFUND REMOVAL SITE EVALUATION

# and

# REMOVAL PRELIMINARY ASSESSMENT

(Supplemental Waste Inventory Sheet)

IX. HAZARDOUS SUBSTANCES, POLL MATERIAL DESCRIPTION	RDOUS SUBSTANCES, POLLUTANTS OR CONTAMINANT INFORMATION:  CONTAINER INFORMATION									
TRADE NAME/ACTIVE INGREDIENTS	NUMBER of CONTAINERS	SIZE	ТҮРЕ	SOLID or LIQUID	% FULL	CONDITION				
	CONTAINERS			LIQUID						
	<u> </u>	<del>                                      </del>								
	<del> </del>	<u> </u>								
	<del> </del>	<del>                                     </del>								
		<del> </del>								
	-									
<del></del>										
· · · · · · · · · · · · · · · · · · ·	<del></del>									
	<b> </b>									
	<u> </u>									
	<u> </u>									
	<del>                                     </del>									
				·		,				
						· <u></u>				
						·				
						_				

#### ATTACHMENT 1

#### DATA FROM EPA REGION 7 LABORATORY FOR XRF CONFIRMATION SAMPLES

(25 Pages)

# United States Environmental Protection Agency Region 7 901 N. 5th Street Kansas City, KS 66101

**Date:** 06/07/2006

Subject: Transmittal of Sample Analysis Results for ASR #: 3001

Project ID: EMA78Q00

Project Description: United Zinc No. 1 site sampling

From: Dale I. Bates, Director

Regional Laboratory, Environmental Services Division

**To:** Eddie McGlasson SUPR/ER&R

Enclosed are the analytical data for the above-referenced Analytical Services Request (ASR) and Project. The Regional Laboratory has reviewed and verified the results in accordance with procedures described in our Quality Manual (QM). In addition to all of the analytical results, this transmittal contains pertinent information that may have influenced the reported results and documents any deviations from the established requirements of the QM.

Please contact us within 14 days of receipt of this package if you determine there is a need for any changes. Please complete the enclosed Customer Satisfaction Survey and Data Disposition/Sample Release memo for this ASR as soon as possible. The process of disposing of the samples for this ASR will be initiated 30 days from the date of this transmittal unless an alternate release date is specified on the Data Disposition/Sample Release memo.

If you have any questions or concerns relating to this data package, contact our customer service line at 913-551-5295.

#### **Enclosures**

cc: Analytical Data File.

**Summary of Project Information** 

06/07/2006

ASR Number: 3001

**Project Manager:** Eddie McGlasson

Org: SUPR/ER&R

**Phone:** 913-551-7756

Project ID: EMA78Q00

Project Desc: United Zinc No. 1 site sampling

Location: Iola State: Kansas Program: Superfund

Site Name: United Zinc No. 1 - Site ID: A78Q Site OU: 00

Purpose: Site Characterization

#### Explanation of Codes, Units and Qualifiers used on this report

**Sample QC Codes:** QC Codes identify the type of sample for quality control purpose. **Units:** Specific units in which results are reported.

\_\_ = Field Sample % = Percent

FD = Field Duplicate mg/kg = Milligrams per Kilogram

**Data Qualifiers:** Specific codes used in conjunction with data values to provide additional information on the quality of reported results, or used to explain the absence of a specific value.

(Blank) = Values have been reviewed and found acceptable for use.

J = The identification of the analyte is acceptable; the reported value is an estimate.

U = The analyte was not detected at or above the reporting limit.

# **Sample Information Summary**

ASR Number: 3001

**Project ID:** EMA78Q00 **Project Desc:** United Zinc No. 1 site sampling

Sample No		Matrix	Location Description	External Sample No	Start Date	Start Time	End Date	End Time	Receipt Date
1 .		Solid	EPA #2, Cell 2		04/11/2006	15:15			04/17/2006
		Solid	EPA #2, Cell 8		04/11/2006	15:50			04/17/2006
2 -	· FD	Solid	EPA #2, Cell 8/Field Duplicate of		04/11/2006	15:50			04/17/2006
4.		Solid	sample 2 EPA #3, Cell 7		04/12/2006				04/17/2006
	_	Solid	EPA #4, Cell 3		04/12/2006	13:30			04/17/2006
	· <u> </u>	Solid	EPA #5, Cell 8		04/12/2006	15:30			04/17/2006
		Solid	EPA #5, Cell 2		04/12/2006	15:15			04/17/2006
	·	Solid	EPA #6, Cell 3		04/13/2006	09:30			04/17/2006
9 -	_	Solid	EPA #13, Cell 2		04/13/2006	09:55			04/17/2006
10 -	·	Solid	EPA #6, Cell 16		04/13/2006	11:30			04/17/2006
11 -		Solid	EPA #7, Cell 1		04/13/2006	14:00			04/17/2006
12 -	<del>-</del>	Solid	EPA #12, Cell 2		04/13/2006	16:32			04/17/2006
13 -	· —	Solid	EPA #10, Cell 1		04/14/2006	08:50			04/17/2006
14 -		Solid	EPA #14, Cell 3		04/14/2006	13:20			04/17/2006
15 -		Solid	EPA #28, Cell 2		04/18/2006	12:15			04/25/2006
16 -		Solid	EPA #42, Cell 3		04/19/2006	08:45			04/25/2006
17 -		Solid	EPA #37, Cell 1		04/19/2006	11:15			04/25/2006
18 -		Solid	EPA #48, Cell 1		04/19/2006	13:35			04/25/2006
19 -		Solid	EPA #39, Cell 1		04/19/2006	15:20			04/25/2006
20 -			EPA #35, Cell 4		04/20/2006	08:25			04/25/2006
21 -			EPA #16, Cell 4		04/20/2006	10:15			04/25/2006
22 -			EPA #29, Cell 2		04/20/2006	14:30			04/25/2006
23 -			EPA #30, Cell 1 EPA #50, Cell 1		04/20/2006 04/21/2006	15:15 08:30			04/25/2006
24 - 25 -			EPA #56, Cell 1		04/21/2006	11:30			04/25/2006 04/25/2006
26 -		Solid	EPA 58, Cell 1		04/24/2006	15:15			05/01/2006
27 -			EPA 76, Cell 3		04/25/2006	09:15			05/01/2006
28 -			EPA 64, Cell 1		04/25/2006	10:05			05/01/2006
29 -			EPA 80, Cell 3		04/25/2006	17:00			05/01/2006
30 -			EPA 81, Cell 4		04/26/2006				05/01/2006
31 -			EPA 67, Cell 1		04/26/2006	11:18			05/01/2006
32 -		Solid	EPA 87, Cell 1		04/26/2006	16:21			05/01/2006
33 -		Solid	EPA 102, Cell 2		04/27/2006	08:33			05/01/2006
34 -		Solid	EPA 92, Cell 1		04/27/2006	13:30			05/01/2006
35 -		Solid	EPA 89, Cell 1		04/27/2006	15:45			05/01/2006
36 -	_	Solid	EPA 137, Cell 1		05/01/2006	17:15			05/05/2006
37 -		Solid	EPA 107, Cell 1		05/02/2006	09:45			05/05/2006
38 -			EPA 110, Cell 1		05/02/2006	10:10			05/05/2006
39 -			EPA 142, Cell 2		05/02/2006	13:59			05/05/2006
40 -			EPA 144, Cell 1		05/02/2006	14:50			05/05/2006
41 -			EPA 144, Cell 3		05/02/2006	15:00			05/05/2006
42 -			EPA 141, Cell 1		05/03/2006	09:05			05/05/2006
43 -			EPA 148, Cell 1		05/03/2006	10:31			05/05/2006
44 -		Solid	EPA 158, Cell 1		05/03/2006	14:18			05/05/2006

# **Sample Information Summary**

Project ID: EMA78Q00

ASR Number: 3001

	QC ode Matrix	C Location Description	External Sample No	Start Date	Start Time	End Date	End Time	Receipt Date
45	Solid	EPA 156, Cell 2		05/03/2006	14:33			05/05/2006
46	Solid	EPA 171, Cell 2		05/04/2006	15:48			05/05/2006
47	Solid	EPA 183, Cell #1		05/08/2006	13:10			05/16/2006
48	Solid	EPA 179, Cell #2		05/08/2006	14:47			05/16/2006
49	Solid	EPA 190, Cell #1		05/09/2006	13:55			05/16/2006
50	Solid	EPA 185, Cell #1		05/10/2006	09:03			05/16/2006
51	Solid	EPA 201, Cell #1		05/10/2006	13:06			05/16/2006
52	Solid	EPA 198, Cell #1		05/10/2006	15:50			05/16/2006
53	Solid	EPA 205, Cell #1		05/11/2006	08:47			05/16/2006
54	Solid	EPA 197, Cell #1		05/11/2006	09:10			05/16/2006
55	Solid	EPA 208, Cell #2		05/11/2006	14:05			05/16/2006
56	Solid	EPA 216, Cell #1		05/15/2006	11:55			05/22/2006
57	Solid	EPA 218, Cell #2		05/15/2006	13:00			05/22/2006
58	Solid	EPA 220, Cell #1		05/15/2006	13:35			05/22/2006
59	Solid	EPA 221, Cell #1		05/15/2006	16:00			05/22/2006
60	Solid	EPA 234, Cell #2		05/16/2006	08:30			05/22/2006
61	Solid	EPA 229, Cell #3		05/16/2006	10:25			05/22/2006
62	Solid	EPA 225, Cell #1		05/16/2006	11:05			05/22/2006
63	Solid	EPA 223, Cell #1		05/16/2006	13:05			05/22/2006
64	Solid	EPA 223, Cell #1		05/16/2006	14:55			05/22/2006
65	Solid	EPA 237, Cell #2		05/16/2006	16:55			05/22/2006
66	Solid	EPA 239, Cell #1		05/17/2006	08:45			05/22/2006
67	Solid	EPA 236, Cell #2		05/17/2006	09:31			05/22/2006
68	Solid	EPA 248, Cell #3		05/17/2006	10:30			05/22/2006
69	Solid	EPA 243, Cell #1		05/17/2006	12:00			05/22/2006
70	Solid	EPA 244, Cell #3		05/17/2006	12:40			05/22/2006
71	Solid	EPA 246, Cell #1		05/17/2006	13:05			05/22/2006
72	Solid	EPA 246, Cell #3		05/17/2006	13:10			05/22/2006
73	Solid	EPA 249, Cell #1		05/18/2006	08:25			05/22/2006
74	Solid	EPA 255, Cell #1		05/18/2006	10:15			05/22/2006
75	Solid	EPA #255, Cell #1		05/18/2006	12:55			05/22/2006

**RLAB Approved Analysis Comments** 

ASR Number:3001 06/07/2006

Project Desc: United Zinc No. 1 site sampling

#### **Analysis Comments About Results For This Analysis**

1 Metals in Solids by ICP

Project ID: EMA78Q00

Lab: Region 7 EPA Laboratory - Kansas City, Ks.

Method: EPA Region 7 RLAB Method 3122.3B

Samples:	1	2	2-FD	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	31	32	33	34	35
	36	37	38	39	40	41	42
	43	44	45	46	47	48	49
	50	51	52	53	54	55	56
	57	58	59	60	61	62	63
	64	65	66	67	68	69	70
	71-	72-	73-	74-	75-		

#### Comments:

Zinc was J-coded in sample 1, 21, 41 and 61. Although the analyte in question has been positively identified in the sample, the quantitation is an estimate (J-coded) due to low recovery of this analyte in the laboratory matrix spike. The actual concentration for this analyte may be higher than the reported value.

Arsenic was J-coded in sample 21. Although the analyte in question has been positively identified in the sample, the quantitation is an estimate (J-coded) due to high recovery of this analyte in the laboratory matrix spike. The actual concentration for this analyte may be lower than the reported value.

Lead was J-coded in sample 41. Although the analyte in question has been positively identified in the sample, the quantitation is an estimate (J-coded) due to poor precision obtained for this analyte in the laboratory matrix spike and matrix spike duplicate.

Percent Solid 1

Lab: Region 7 EPA Laboratory - Kansas City, Ks.

Method: EPA Region 7 RLAB Method 3142.9D

Samples:	1	2	2-FD	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	31	32	33	34	35
	36	37	38	39	40	41	42
	43	44	45	46	47	48	49
	50	51	52	53	54	55	56
	57	58	59	60	61	62	63
	64	65	66	67	68	69	70
	71-	72-	73-	74-	75-		

# **RLAB Approved Analysis Comments**

06/07/2006

**Project ID:** EMA78Q00 **Project Desc:** United Zinc No. 1 site sampling

**Comments About Results For This Analysis Analysis** 

**Comments:** 

(N/A)

**ASR Number: 3001 RLAB Approved Sample Analysis Results** 

1 Percent Solid Solids, percent

Project Desc: United Zinc No. 1 site sampling

67.8

81.4

80.9

06/07/2006

88.5

Project ID: EMA78Q00 Analysis/ Analyte Units 1-\_\_\_ 2-\_\_\_ 2-FD 4-\_\_ 1 Metals in Solids by ICP Arsenic mg/kg 8.75 7.82 5.38 13.4 Barium mg/kg 117 139 142 177 Cadmium mg/kg 7.81 4.42 4.09 9.02 Lead mg/kg 585 596 496 501 Zinc 1340 J mg/kg 851 841 1550

%

Page 7 of 25

**RLAB Approved Sample Analysis Results** 

06/07/2006

Project ID: EMA78Q00 Project Desc: United Zinc No. 1 site sampling

ASR Number: 3001

Analysis/ Analyte	Units	5	6	7	8
1 Metals in Solids by ICP					
Arsenic	mg/kg	, 8.86	5.47	6.46	4.71
Barium	mg/kg	125	133	161	150
Cadmium	mg/kg	4.38	5.05	5.84	4.40
Lead	mg/kg	263	284	223	210
Zinc	mg/kg	472	836	684	536
1 Percent Solid					
Solids, percent	%	90.0	89.8	93.8	91.3

# **RLAB Approved Sample Analysis Results**

06/07/2006

Project ID: EMA78Q00

Analysis/ Analyte	Units	9	10	11	12
1 Metals in Solids by ICP					ì
Arsenic	mg/kg	11.0	5.42	7.47	13.5
Barium	mg/kg	139	172	144	184
Cadmium	mg/kg	10.3	6.92	31.5	8.21
Lead	mg/kg	961	228	736	806
Zinc	mg/kg	1740	677	3090	1610
1 Percent Solid					
Solids, percent	%	78.9	84.3	81.2	90.5

# **RLAB Approved Sample Analysis Results**

06/07/2006

Project ID: EMA78Q00

Analysis/ Analyte	Units	13	14	15	16
1 Metals in Solids by ICP					
Arsenic	mg/kg	108	10.6	6.55	11.4
Barium .	mg/kg	140	159	334	168
Cadmium	mg/kg	15.7	11.2	6.95	6.58
Lead	·mg/kg	869	539	135	420
Zinc	mg/kg	2280	1420	444	900
1 Percent Solid	V V				
Solids, percent	%	84.7	91.0	90.1	87.7

# **RLAB Approved Sample Analysis Results**

06/07/2006

Project ID: EMA78Q00

Units	17	18	19	20
mg/kg	7.30	12.1	7.62	7.44
mg/kg	149	158	174	196
mg/kg	7.08	8.97	6.05	7.21
mg/kg	434	2290	440	582
mg/kg	1130	1690	750	1010
%	83.7	79.8	89.7	89.7
	mg/kg mg/kg mg/kg mg/kg mg/kg	mg/kg 7.30 mg/kg 149 mg/kg 7.08 mg/kg 434 mg/kg 1130	mg/kg 7.30 12.1 mg/kg 149 158 mg/kg 7.08 8.97 mg/kg 434 2290 mg/kg 1130 1690	mg/kg 7.30 12.1 7.62 mg/kg 149 158 174 mg/kg 7.08 8.97 6.05 mg/kg 434 2290 440 mg/kg 1130 1690 750

RLAB Approved Sample Analysis Results

06/07/2006

Project ID: EMA78Q00

Analysis/ Analyte	Units	21	22	23	24
1 Metals in Solids by ICP					
Arsenic	mg/kg	7.37 J	8.40	10.1	11.7
Barium	mg/kg	257	159	155	168
Cadmium	mg/kg	8.20	10.9	12.2	8.00
Lead	mg/kg	745	571	681	567
Zinc	mg/kg	1160 J	1480	1600	985
1 Percent Solid					
Solids, percent	%	87.3	91.4	93.3	81:6

**RLAB Approved Sample Analysis Results** 

06/07/2006

Project ID: EMA78Q00

Analysis/ Analyte	Units	25	26	27	28
1 Metals in Solids by ICP					
Arsenic	mg/kg	19.2	21.0	7.46	14.8
Barium	mg/kg	140	162	160	149
Cadmium	mg/kg	9.74	8.26	9.53	8.37
Lead	mg/kg	1040	769	1050	1150
Zinc	mg/kg	1730	1470	1180	2140
1 Percent Solid					
Solids, percent	%	89.1	71.0	68.5	72.3

ASR Number: 3001 RLAB Approved Sample Analysis Results

Project ID: EMA78Q00

**Project Desc:** United Zinc No. 1 site sampling

06/07/2006

Analysis/ Analyte	Units	29	30	31	32
1 Metals in Solids by ICP					
Arsenic	mg/kg	5.30	7.91	7.85	17.9
Barium	mg/kg	128	99.4	130	152
Cadmium	mg/kg	7.92	8.92	7.01	17.3
Lead	mg/kg	490	246	288	1200
Zinc	mg/kg	1140	852	833	2400
1 Percent Solid					
Solids, percent	%	69.4	75.5	73.4	76.9

RLAB Approved Sample Analysis Results

06/07/2006

**ASR Number:** 3001

Analysis/ Analyte	Units	33	34	. 35	36
1 Metals in Solids by ICP					
Arsenic	mg/kg	10.3	8.01	7.51	5 U
Barium	mg/kg	175	136	142	187
Cadmium	mg/kg	7.52	6.35	9.05	7.68
Lead	mg/kg	704	556	417	284
Zinc	mg/kg	1310	745	1150	1140
1 Percent Solid					
Solids, percent	%	62.9	74.2	76.0	73.9

**RLAB Approved Sample Analysis Results** ASR Number: 3001

06/07/2006

Project ID: EMA78Q00 Project Desc: United Zinc No. 1 site sampling

Analysis/ Analyte	Units	37	38	39	40
1 Metals in Solids by ICP					
Arsenic	mg/kg	7.66	5 U	6.70	9.94
Barium	mg/kg	163	129	139	127
Cadmium	mg/kg	7.69	4.68	8.16	9.23
Lead	mg/kg	616	246	209	578
Zinc	mg/kg	1080	762	766	1860
1 Percent Solid					
Solids, percent	%	71.8	69.8	73.6	61.6

ASR Number: 3001 RLAB Approved Sample Analysis Results

Project ID: EMA78Q00 Project Desc: United Zinc No. 1 site sampling

Analysis/ Analyte	Units	41	42	43	44
1 Metals in Solids by ICP					
Arsenic	mg/kg	14.8	6.09	3.96	6.86
Barlum	mg/kg	150	172	198	190
Cadmium	mg/kg	6.74	8.84	5.47	5.65
Lead	mg/kg	798 J	249	106	148
Zinc	mg/kg	1210 J	1020	483	515
1 Percent Solid	•				
Solids, percent	%	69.8	71.2	70.2	82.5

06/07/2006

ASR Number: 3001 RLAB Approved Sample Analysis Results

Project ID: EMA78Q00

**Project Desc:** United Zinc No. 1 site sampling

06/07/2006

Analysis/ Analyte	Units	45	46	47	48
1 Metals in Solids by ICP					
Arsenic	mg/kg	8.20	5.43	13.2	7.42
Barium	mg/kg	150	172	126	107
Cadmium	mg/kg	11.0	6.12	7.84	6.80
Lead	mg/kg	342	282	530	411
Zinc	mg/kg	1090	588	1290	1120
1 Percent Solid					
Solids, percent	%	75.8	71.8	67.1	65.9

**RLAB Approved Sample Analysis Results** ASR Number: 3001

06/07/2006

Project ID: EMA78Q00 **Project Desc:** United Zinc No. 1 site sampling

Analysis/ Analyte	Units	49	50	51	52
1 Metals in Solids by ICP					
Arsenic	mg/kg	12.0	5.80	8.04	9.28
Barium	mg/kg	112	117	107	129
Cadmium	mg/kg	6.37	5.53	27.7	7.15
Lead	mg/kg	336	397	764	562
Zinc	mg/kg	785	741	2470	1100
1 Percent Solid					
Solids, percent	%	65.9	73.7	64.4	71.8

# **RLAB Approved Sample Analysis Results**

06/07/2006

Project ID: EMA78Q00

Analysis/ Analyte	Units	53	54	55	56
1 Metals in Solids by ICP					
Arsenic	mg/kg	7.18	7.55	5.22	5.27
Barium	mg/kg	121	114	120	180
Cadmium	mg/kg	6.52	7.68	7.89	6.95
Lead	mg/kg	186	504	258	496
Zinc	mg/kg	578	1080	856	1030
1 Percent Solid	•				
Solids, percent	. %	64.3	69.6	67.2	75.2
outury percent	,,			J	

**RLAB Approved Sample Analysis Results** 

06/07/2006

Project ID: EMA78Q00 Project Desc: United Zinc No. 1 site sampling

ASR Number: 3001

Analysis/ Analyte	Units	57	58	59	60
1 Metals in Solids by ICP					
Arsenic	mg/kg	7.36	8.48	8.80	16.2
Barlum	mg/kg	117	140	118	200
Cadmium	mg/kg	6.35	7.03	7.46	9.85
Lead	mg/kg	494	837	614	872
Zinc	mg/kg	1080	1040	1460	1530
1 Percent Solid					
Solids, percent	%	81.3	80.6	78.3	78.8

**RLAB Approved Sample Analysis Results** ASR Number: 3001

06/07/2006

Project ID: EMA78Q00 Project Desc: United Zinc No. 1 site sampling

Analysis/ Analyte	Units	61	62	63	64
1 Metals in Solids by ICP					•
Arsenic	mg/kg	6.62	9.00	49.2	6.59
Barium	mg/kg	271	149	131	188
Cadmium	mg/kg	5.81	6.75	14.6	9.71
Lead	mg/kg	362	551	1960	618
Zinc	mg/kg	723 J	1010	2880	1260
1 Percent Solid					
Solids, percent	%	86.5	80.1	79.4	71.3

# **RLAB Approved Sample Analysis Results**

06/07/2006

Project ID: EMA78Q00

ASR Number: 3001 RLAB Approved Sample Analysis Results

Project ID: EMA78Q00

Project Desc: United Zinc No. 1 site sampling

06/07/2006

Analysis/ Analyte	Units	69	70	71	72
1 Metals in Solids by ICP					
Arsenic	mg/kg	8.24	16.5	9.26	21.4
Barium	mg/kg	155	1254	136	151
Cadmium	mg/kg	5.76	8.04	5.32	8.16
Lead	mg/kg	460	554	633	1360
Zinc	mg/kg	935	1240	1020	1690
1 Percent Solid					
Solids, percent	%	85.2	88.2	87.3	88.3

**ASR Number: 3001 RLAB Approved Sample Analysis Results** 

Project ID: EMA78Q00

Project Desc: United Zinc No. 1 site sampling

06/07/2006

Analysis/ Analyte	Units	73	74	75
1 Metals in Solids by ICP				
Arsenic	mg/kg	7.52	16.8	16.6
Barium	mg/kg	157	158	137
Cadmium	mg/kg	6.52	8.80	6.79
Lead	mg/kg	585	844	464
Zinc	mg/kg	1270	1530	1200
1 Percent Solid			•	
Solids, percent	%	78.2	77.1	80.3

# **ATTACHMENT 2**

# DATA FROM EPA REGION 7 LABORATORY FOR BIOAVAILABILITY SAMPLES

(Six Pages)

# United States Environmental Protection Agency Region 7 901 N. 5th Street Kansas City, KS 66101

**Date:** 06/16/2006.

**Subject:** Transmittal of Sample Analysis Results for ASR #: 3057

Project ID: EMA78Q00

Project Description: United Zinc No. 1 site sampling

**From:** Dale I. Bates, Director

Regional Laboratory, Environmental Services Division

To: Eddie McGlasson

SUPR/ER&R

Enclosed are the analytical data for the above-referenced Analytical Services Request (ASR) and Project. The Regional Laboratory has reviewed and verified the results in accordance with procedures described in our Quality Manual (QM). In addition to all of the analytical results, this transmittal contains pertinent information that may have influenced the reported results and documents any deviations from the established requirements of the QM.

Please contact us within 14 days of receipt of this package if you determine there is a need for any changes. Please complete the enclosed Customer Satisfaction Survey and Data Disposition/Sample Release memo for this ASR as soon as possible. The process of disposing of the samples for this ASR will be initiated 30 days from the date of this transmittal unless an alternate release date is specified on the Data Disposition/Sample Release memo.

If you have any questions or concerns relating to this data package, contact our customer service line at 913-551-5295.

#### **Enclosures**

cc: Analytical Data File.

ASR Number: 3057 **Summary of Project Information**  06/16/2006

Project Manager: Eddie McGlasson

Org: SUPR/ER&R

**Phone:** 913-551-7756

Project ID: EMA78Q00

Project Desc: United Zinc No. 1 site sampling

Location: Iola

State: Kansas

Program: Superfund

Site Name: United Zinc No. 1 -

Site ID: A78Q Site OU: 00

Purpose: Site Characterization

#### Explanation of Codes, Units and Qualifiers used on this report

Sample QC Codes: QC Codes identify the type of sample for quality control purpose.

**Units:** Specific units in which results are

reported.

\_\_ = Field Sample

% = Percent

Data Qualifiers: Specific codes used in conjunction with data values to provide additional information on the quality of reported results, or used to explain the absence of a specific value.

(Blank) = Values have been reviewed and found acceptable for use.

# **Sample Information Summary**

06/16/2006

**Project ID:** EMA78Q00 **Project Desc:** United Zinc No. 1 site sampling

Sample No		Matrix	Location Description	External Sample No	Start Date	Start Time	End Date	End Time	Receipt Date
1 -		Solid	EPA #7, Cell #3 (KS Drive and Highway 54)		06/06/2006	11:10			06/07/2006
2 -	_	Solid	EPA #138A, Cell #3 (1508 East Monroe)		06/06/2006	11:29			06/07/2006
3 -	_	Solid	EPA #21, Cell #2 (206 South 4th)		06/06/2006	11:50			06/07/2006
4 -	_	Solid	EPA #54, Cell #1 (403 South Street)		06/06/2006	12:20			06/07/2006
5 -	_	Solid	EPA #48, Cell #2 (508 South Street)		06/06/2006	12:35			06/07/2006
6 -	_	Solid	EPA #223, Cell #1 (221 South Elm)		06/06/2006	12:00			06/07/2006

#### **RLAB Approved Analysis Comments**

06/16/2006

Project ID: EMA78Q00

Project Desc: United Zinc No. 1 site sampling

#### **Analysis** Comments About Results For This Analysis

1 Bioaccessible Lead in Soil by ICP

Lab: Region 7 EPA Laboratory - Kansas City, Ks.

Method: EPA Region 7 RLAB Method 3122.3B Applied to Samples Digested for

"Bioavailable" Results

**Samples:** 1-\_\_ 2-\_\_ 3-\_\_ 4-\_\_ 5-\_\_ 6-\_\_

**Comments:** 

(N/A)

**RLAB Approved Sample Analysis Results** 

06/16/2006

Project ID: EMA78Q00

Analysis/ Analyte	Units	1	2	3	4
Bioaccessible Lead in Soil by ICP     Lead, Bioaccessible	%	62.8	70.6	77.2	79.8

**RLAB Approved Sample Analysis Results** 

06/16/2006

Project ID: EMA78Q00

Analysis/ Analyte	Units	5	6
Bioaccessible Lead in Soil by ICP Lead, Bioaccessible	%	86.5	70.3

# ATTACHMENT 3

# DATA FROM UNIVERSITY OF COLORADO LABORATORY FOR BIOAVAILABILITY SAMPLES AND DATA VALIDATION REPORT

(Four Pages)

TABLE 2. Preliminary Summary Of In Vitro Bioassay Results

Sample		<u>Q</u>	Pb in <250u bulk soil mg/kg	mass soil (g)	calc Pb #1	ICP Pb (mg/l)	solution amt (I)	% Relative Pb Bioavailability
UZ-1	EPA 7 C#3	704	13 1.0	0047 7	7.05	52.48	0.1	74
UZ-2	EPA 138a C#	3 249	96 1.0	0052 2	2.50	18.08	0.1	72
UZ-3	EPA 21 C#2	511	13 1.	.0004 5	5.12	43.27	0.1	85
UZ-4	EPA 54 C#1	228	35 1.0	0097 2	2.29	18.05	0.1	79
UZ-5	EPA 48 C#2	86	1 1.0	0087 0	).86	7.42	0.1	86
UZ-6	EPA 223 C#1	338	33 1.0	0041 3	3.38	22.54	0.1	67

# Tetra Tech EM Inc. DATA VALIDATION REPORT LEVEL II

Site: United Zinc #1 Site

Laboratory: Laboratory of Environment and Geological Sciences (LEGS)

University of Colorado, Boulder

Data Reviewer: Nancy McDonald, Tetra Tech EM Inc. (Tetra Tech)

Review Date July 28, 2006

Sample Delivery Group (SDG): Not Specified

Sample Numbers: UZ-1 through UZ-6

Matrix / Number of Samples: 6 soils

The data were qualified according to the U.S. Environmental Protection Agency (EPA) Region 7 document entitled "Contract Laboratory Program Data Validation Functional Guidelines for Evaluating Inorganic Analytical Data" (2430.4C, March 1995). In addition, the Tetra Tech document "Review of Data Packages from Subcontracted Laboratories" (February 2002) was used along with other criteria specified in the LEGS Standard Operating Procedure (SOP).

The review was intended to identify problems and quality control (QC) deficiencies that were readily apparent from the summary data package. The following sections discuss any problems or deficiencies that were found, and data qualifications applied because of non-compliant QC. The data review was limited to the available field and laboratory QC information submitted with the project specific data package.

I, Nancy McDonald, certify that all data validation criteria outlined in the above referenced documents were assessed, and any qualifications made to the data were in accordance with those documents.

Certified by Nancy McDonald, Chemist Date

#### DATA VALIDATION QUALIFIERS

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

#### DATA ASSESSMENT

The data package included six (6) soil environmental samples. The samples were analyzed for relative lead bioavailability by the LEGS SOP for relative bioavailability leaching procedure and EPA Method 6010B. There were no field blanks, field duplicates, or performance evaluation samples associated with this data package. The following summarizes the data validation that was performed.

#### I. Holding Time and Chain of Custody (COC) Requirements

The samples were received by the laboratory and processed within established holding times. No data were qualified.

#### II. Serial Dilution

A five-fold serial dilution analysis was not performed with the samples in this SDG. No data were qualified because of this data gap.

#### III. Matrix Spike (MS)

A MS analysis was not performed on a sample from this data package. No data were qualified because of this data gap.

#### IV. Blanks

Low-level concentrations of lead were detected in the blanks. No data were qualified because sample results were greater than 10 times the blank concentrations.

#### V. Laboratory Control Sample (LCS)

LCS data were not reported with this data package. Therefore, lead results are considered estimated (J) in all samples.

#### VI. Comments

There are no additional comments on this SDG.

#### VII. Overall Assessment of Data

Overall data quality is acceptable, with the following qualifications. Lead results are considered estimated (J) in all samples because both LCS and MS results were omitted from the data package. All data are usable for their intended purposes.